

OPTANE EXPLAINED
INSIDE INTEL'S NEW DRIVE TECHNOLOGY



AMD RX REFRESH
IS THE RX500 SERIES OF GPU WORTH IT?



AUSTRALIA'S #1 PC GAMING MAG

PC PowerPlay

SINCE 1996

DESTINY 2

THE LAST CITY
HAS FALLEN, BUT
MANKIND FIGHTS ON!

RIME

A MELANCHOLY
ISLAND ADVENTURE

ENDLESS SPACE 2

A 4X FIGHT TO
CONTROL THE GALAXY

nextmedia



63

ISSUE #263

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THE BEST SELLING FIGHTING GAME FRANCHISE RETURNS

TEKKEN 7™

PS4 XBOX ONE

f/TEKKEN

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M

Mature themes and
violence, VII and
online interactivity

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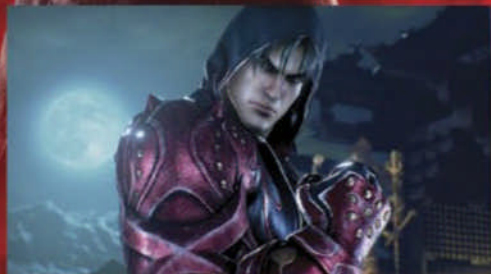
BANDAI
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ALL FIGHTS ARE PERSONAL

EXPERIENCE THE EPIC SHOWDOWN OF THE MISHIMA CLAN THROUGH STUNNING STORY-DRIVEN CINEMATIC BATTLES AND INTENSE DUELS THAT CAN BE ENJOYED WITH FRIENDS AND RIVALS



Love, Revenge, Pride. Each one of us has a reason to fight. Values are what define us and make us human, regardless of our strengths and weaknesses. There are no wrong motivations, just the path we choose to take. Powered by Unreal Engine 4, *TEKKEN 7* is available now on PS4, Xbox One and for the first time on PC.



UNREAL ENGINE 4

Powered by Unreal Engine 4, *TEKKEN 7* is the best looking *TEKKEN* game ever through near photo-realistic graphics and the addition of stunning fighting effects



SEAMLESS STORY EXPERIENCE

Over-the-top cinematic story sequences blending flawlessly into fierce battles that unveils the thrilling storyline on the Mishima family in a very innovative way.



AKUMA

Street Fighter's Akuma flawlessly transitions into the 3D space and joins the fray in an epic franchise mash-up complete with all his shoto-style moves and fireballs.



ROSTER OF OVER 30 PLAYABLE CHARACTER

A solid roster of over 30 characters including brand new fighters with one of the world's biggest move-set list in a fighting game that allows for a complete freedom of your fighting style. Find your favourite deadly techniques, martial arts moves and combos to win the fight!



ALL NEW BATTLE MECHANICS & MOVES

Classic 1vs1 battles return along with new moves and battle mechanics like "Rage Arts", "Power Crashes" and "Rage Drives" that make gameplay more accessible for players of all skill levels. Beating your friends in *TEKKEN 7* will be based on either focused training or just pure fun.



THE FINAL CHAPTER OF THE MISHIMA BLOOD SAGA

TEKKEN 7 represents the final chapter of the 20-year-long Mishima feud. Unveil the monumental ending to the emotionally charged family warfare between members of the Mishima clan as they struggle to settle old scores and battle for control of a global empire, putting the balance of the world in peril...

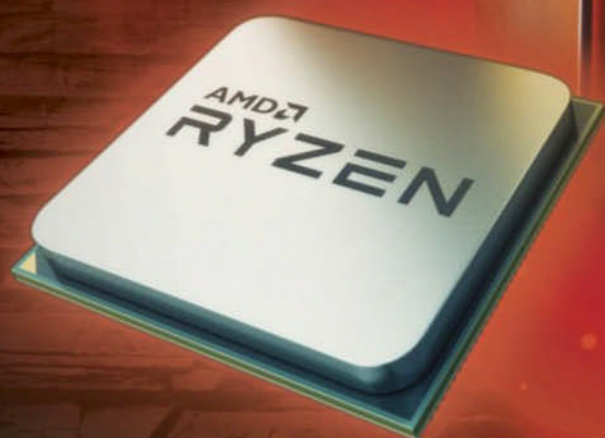
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>PCPP
#263



ON THE COVER

DESTINY 2

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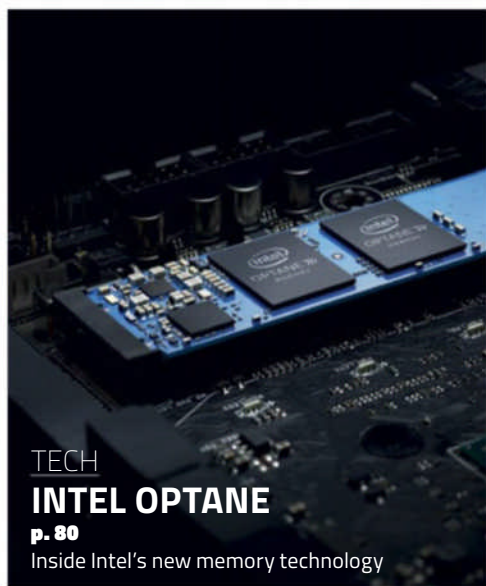
Can the console shooter/MMO
cope with a transition to the PC?



REVIEW RIME

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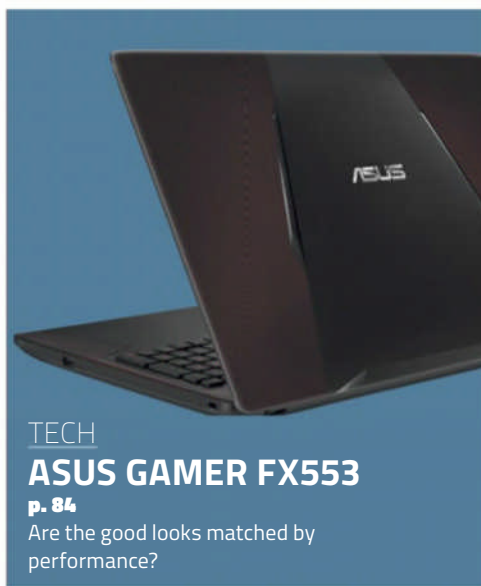
Yell at statues, pick fruit and solve the mystery of Enu



TECH INTEL OPTANE

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Inside Intel's new memory technology



TECH

ASUS GAMER FX553

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Are the good looks matched by performance?

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ALMOST TOO QUIET

The office, and the gaming world as a whole is very quiet at the moment, and for the same reasons. As I write this, most of the tech and gaming team from Next is in Taiwan in preparation for the hectic three days that are Computex. Malky and I are here holding down the fort, answering phones and sending the latest issue of PCPP. A little under two weeks after Computex wraps up, it's time for E3. As a result the gaming world, at least from this side of the desk seems to be holding its breath. Nobody is saying or doing anything that could possibly lead to a leak of big new games that are going to be announced at the show. For an industry that thrives on overloading the press with releases and information, the sudden silence is more than a little jarring.

One thing that is certain from the silence is that E3 this year is going to be a big one. This issue comes out the day before the show starts so hopefully my prophecies will ring true, but I have a feeling this is going to be the year for big announcements when it comes to new IPs. Nearly every email I received to set up appointments to see things at E3 contained a list of already announced titles for hands on and at least one behind closed doors look at a new title. Just how many of them are related to superheroes or Star Wars remains to be seen.

Due to the proximity to Computex, tech this month is a little odd as well. Although the cards are just around a year old, AMD has made their RX400 series of cards redundant with a small refresh, upping the clock speeds and lowering the prices. Hopefully this move was made in anticipation of the AMD Vega cards being launched during Computex to challenge Nvidia at the high end of the market. All the cards will be on the table by the time you can read this. With any luck I'll be proven right so I won't look like too much of a dumbass. No more than usual anyway.

Daniel Wilks
Prognosticator
[@drwilkenstein](#)

QUOTES OF THE MONTH

"I was a player as a 12-year-old"

"Punch me in the emotional groin"

"Now I have Ben spit on me for the third time today"

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INTERN We need a new one

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LABS REVIEWS:

- + INTEL OPTANE
- + HP PAVILLION WAVE
- + OCULUS TOUCH
- + GIGABYTE AERO 15
- + ASUS VC66R MINI PC
- + DREAMVISION 32" AIO GAME PC
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ISSUE 236 JULY 2017

ON SALE NOW

Inbox



Some might suggest
Ubisoft Support is stuck
in the Stone Age.

customer service and problems have just about become synonymous with U-Play.

THE GRINCH

Something I want to put out there to see what you think, but I'm starting to suspect something with the announcement this week of the release date of the South Park video game. This has been twice out of two games that it's been scheduled for release around Christmas. Then they get in all of the pre-sale money for Christmas. Then the game comes out one year later, in time for sales for the NEXT Christmas. Sure I know games get delayed and it's not the first game to be delayed. But the same pattern on the same titles? Surely when you schedule a release date, the game is just about finished. I can handle a few weeks overdue. Yet 10 to 12 months! Even Cartman couldn't plot this one!

Regards

Mitchell Hall

Hi Mitchell – whilst it's nice to think there is a conspiracy to rake in Christmas money, the reason for the South Park delays is a lot simpler. Whereas most licensed games have some limited oversight from the original copyright owner, Trey Parker and Matt Stone are extremely hands on with the South Park games. The original game was delayed by rewrites to make the game more topical and the pair wanting changes and tweaks to content. Likely the same is happening with The Fractured But Whole. Parker and Stone are known to be protective of their IP, so they would rather the game come out late than be something they aren't happy with (like previous South Park games).



LETTER OF THE MONTH WINS!

Write in to PCPP with your rants, considered opinions, and endless run-on sentences of pure awesome. The address is letters@pcpowerplay.com.au. Each letter read by hand! Letter of the month wins a copy of *Regalia: Of Men and Monarchs*



U DON'T PLAY

Here's another letter from the sticks, this time not about Sky Muster.

I have an issue with Ubisoft Support I would like to draw your attention to:

On 2 March 2017 I purchased the game *Far Cry Primal* via Steam. After installation I happily played an hour or so. When I tried to resume play a couple of days later the game wouldn't launch and instead saw an error message "This game was already claimed by AFOULON. Please contact Support if you think that is not appropriate".

I also approached Steam, seeing they were the vendor of the games but received the message: "Unfortunately we cannot support games from other developers."

Now, I don't mind so much that there was a glitch in Ubisoft's account verification, I also can (barely) understand that support personnel can get snowed under. However, the fact the same tardy management continued after the case was officially opened and despite my telling them that all 4 Ubisoft games I purchased via Steam are inaccessible.

Andre Foulon

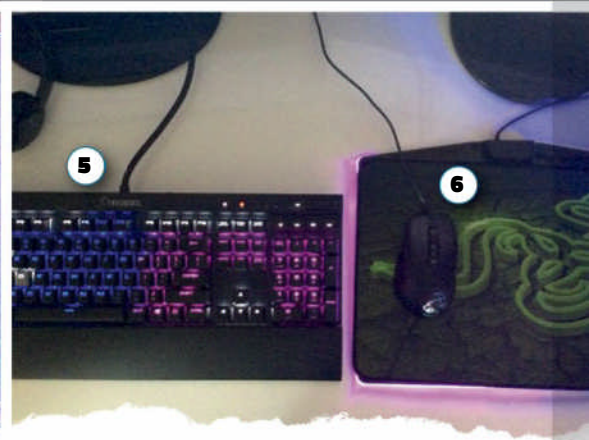
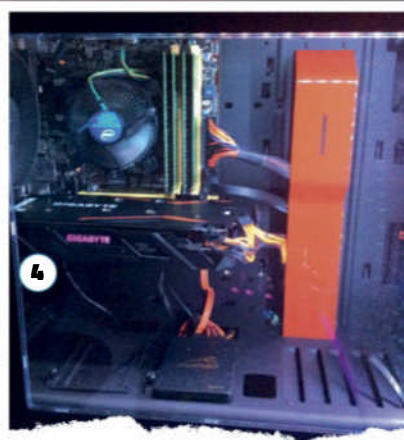
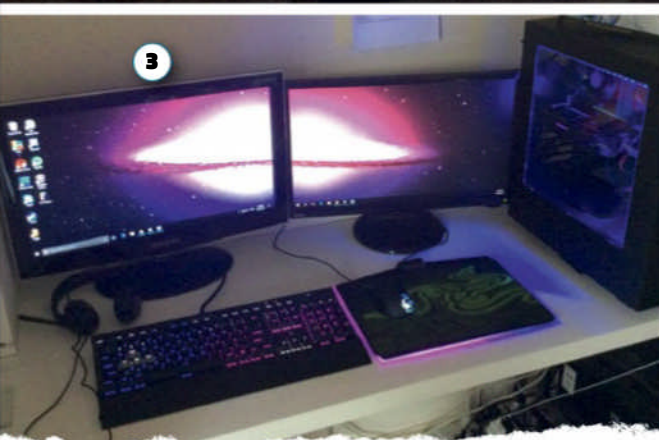
[Editor's note: we've removed the actual correspondence between

Andre and Ubisoft, but for clarity the first was lodged by Andre Saturday March 4, with a follow-up with more clarifying details Monday March 6 and another Thursday March 9. The first response from Ubisoft comes Monday April 3, apologising for the time it took to respond and saying that tickets are usually responded to within 48 hours, and requesting screenshots of the keys used to register the game. Tuesday April 4 Andre responds giving all the detail he can but unable to attach screenshots of keys due to being unable to access the games. A different Ubisoft Support employee responds on Tuesday April 25 telling Andre to log out of the currently logged account and try logging in with a different one. Andre responds Saturday April 29 that he needs Ubisoft to keep the ticket open as his laptop is currently being repaired and he won't be able to implement the fix as yet. He also makes note that so far it has taken over seven weeks to get any kind of solution. Sunday May 7 Andre reports back to Ubisoft that he tried their fix and the problem remains, attaching screenshots.]

Hi Andre. We wish there was something we could do other than sympathise with your plight and throw you a free game, but bad

MAKE YOURSELF HEARD!

f facebook.com/pcpowerplay
www.pcpowerplay.com.au



COLBY, 13, NSW

This month's MY PC
brought to you by

crucial
by micron

Before I start, go easy on me, I'm only 13... Anyway. Ever since I was 12 I've been obsessed with making my own PC and having a setup that would blow people away although around half my stuff is 2nd hand. Unfortunately my parents bought my desk and I can't drill holes for cable management and mount my monitors like a lot of people do and it's a bummer because I love competitive gaming and I want cords for response times but they look bad...

MOST IMPRESSIVE ELEMENTS:

1. Gigabyte 1050Ti G1 Gaming 4GB
2. Corsair K70 Rapidfire RGB MX Speed
3. Corsair MM800 RGB Mousepad (Razer mousepad on top for mouse gripping)
4. Deepcool RGB 350 LED Strip Kit

LAST UPGRADE:

Gigabyte 1050Ti G1 Gaming 4GB

DREAM UPGRADE:

A 1080 Ti, Intel 6950X in a custom liquid cooling loop and maybe more SSD space since I only have 240GB and I've almost run out of space.

WHAT MAKES IT SPECIAL:

It's my first PC that I built on my own, I've built 2 with my dad but he did a lot of the work, and it's entirely RGB so I can have any colour theme I want at any time.

1. Why are those Stormtroopers trying to shoot your PC?
2. Sean loves his RGB mouse pad. Too many "arglebargles" for Wilks though
3. Dual monitors for your first build. Damn.
4. Sure it's no 1080Ti, but the 1050Ti is one of our favourite cards on the market
5. Fine choice of keyboard right there
6. You've got some Razer on your Corsair

COLBY WINS!

Thanks to the good people at Crucial, Colby scores himself a 512GB Crucial MX300 2.5" SSD. Enjoy!



WANT FREE STUFF? Send your MyPC entry today to mypc@pcpowerplay.com.au. Include the four most impressive elements of its hardware, your last upgrade, your dream upgrade, your favourite feature and what you think makes your PC special. Make sure to include your name, age and location. And last but not least, attach a 5MP or bigger image of your PC! No camera phone shots, and make sure it's in focus!



NEW HIGH-END CASES AND TESTBENCHES FROM LIAN LI

Lian Li has some new fancy computer cases for your perusal. First up is the PC-011WGX has two chambers for more efficient cooling, is compatible with motherboards in the E-ATX form-factor, can fit in nine storage devices in drive form-factor, three 360-mm radiators and has a USB 3.1 Type-C header on its front panel. It's themed with ASUS ROG motifs, if you're into that sort of thing. The PC-012 takes things a step further and includes three chambers - one houses the motherboard, another accommodates up to two vertically mounted graphics cards and the third is where a PSU and up to eight storage devices go. For those constantly swapping parts in and out of their rigs, the PC-T70 test bench might be more your style. The open frame case makes swapping Micro-ATX to E-ATX motherboards a piece of cake and can support liquid cooling hardware, namely an up to 360mm radiator, a reservoir, and a pump.



A NEW WAY TO MEASURE AND RANK PSU EFFICIENCY

You know those 80 Plus ratings on power supplies that are supposed to let you know how efficient they are? There's now an alternative rating scheme from a company called Cybenetics called ETA and LAMDA that they say offer greater accuracy than the 80 Plus ratings we've come to know and love. The ETA rating measures power efficiency via "a unique, custom-made application to account for the efficiency results of thousands of different load combinations through a unique proprietary application" and assigns a rating of A+ for the most efficient and D for the power supplies least efficient. LAMDA certification tests for noise levels - the quietest of PSUs gets an A++, with noisy clunkers getting an E. Respected power supply manufacturer Seasonic is already on-board, embracing the ETA and LAMDA ratings for its flagship Prime units.



INTEL TO INTEGRATE THUNDERBOLT 3 INTO UPCOMING CPUS

Thunderbolt is finally getting the love it deserves from Intel, who will start integrating Thunderbolt 3 right into its processors. OEMs will no longer need to shell out for an extra chip just to support Thunderbolt. This means if a motherboard or laptop manufacturer wants to include Thunderbolt 3 support on their product, all they do is hook a port up to the chipset, instead of buying and adding another chip just for it. This effectively makes Thunderbolt 3 support "free." In addition to this, Intel is also making Thunderbolt 3 available on a non-exclusive, royalty-free basis. This allows third-party chip makers to make Thunderbolt-compatible chips, lowering the price and placing the standard in more creative packages - so for end devices (e.g. external SSDs, video capture devices, docking stations) that want to include Thunderbolt 3 support, doing so will be easier and cheaper. Expect to see many more TB3 devices around mid-to-late 2018 thanks to this new approach from Intel.





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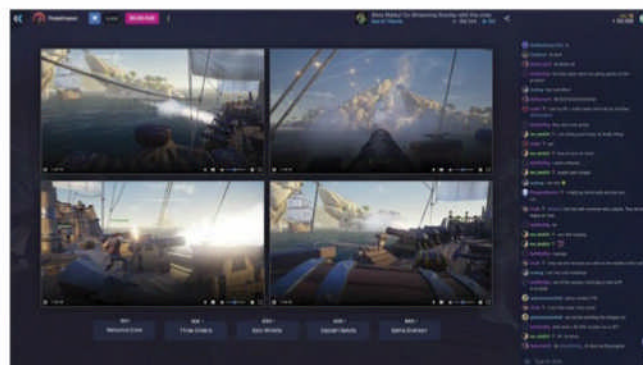
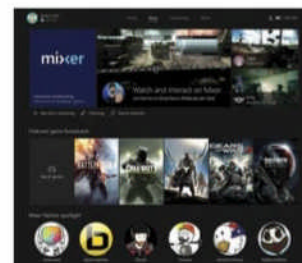


THE RX560 AND GT1030 - NEW BUDGET GRAPHICS CARDS FROM AMD AND NVIDIA

Budget gamers rejoice, for there are some new cheap GPUs for you to enjoy. AMD has quietly launched the Radeon RX560, which it pitches as a cost and power effective way to enjoy various Esports titles such as Overwatch, with 2.5 times the performance of the previous Radeon R7 360 at 1080p with medium quality settings. 2GB versions of the RX560 should sell for around \$150-\$160. But if that's too expensive for you, Nvidia's got your back. The GT 1030 is a graphics card based on the same Pascal architecture as the GTX 1080 and designed to be a step up from the integrated graphics on Intel CPUs, with Nvidia claiming double the performance of Intel's HD Graphics 530. The GT 1030 will have a price of around \$100-\$120 and is in stores now.

MICROSOFT RENAMES BEAM, IS NOW CALLED MIXER

Microsoft has renamed the Beam streaming service it purchased almost a year ago. Beam shall now be referred to as Mixer. Mixer is pretty much Twitch, but by Microsoft. The main reason to use Mixer is that it's baked right in to Windows and has low-level system integration thanks to its inclusion in the latest Windows 10 Creator's Update. This level of integration allows you to do funky things such as "co-streaming," where up to 4 streamers can combine their streams into a single viewer split-screen experience. The streamers in the party can each be doing different things, they don't even need to be playing the same game. Mixer also distinguishes itself by touting "livestreaming that's actually live" with minimal one or two second latency, a huge advantage over Twitch's 10 to 15 seconds for non-partners. With low latency, conversations between streamer and audience can be a lot more natural.



SAY HELLO TO AMD'S THREADRIPPER CPU, ALL 16 CORES AND 32 THREADS OF IT

16-core, 32-thread versions of AMD Ryzen CPUs have been announced and will go head to head with Intel's Broadwell-E and upcoming Skylake-E CPUs, together with a new motherboard platform called Whitehaven. These new high-end desktop CPUs are dubbed "Threadripper" due to the insane amount of threads (i.e: parallel tasks) they can handle. The flagship Threadripper CPU is the Ryzen 9 1998X, with 16-cores, 32-threads, a base frequency of 3.5Ghz and a boosted clock speed of 3.9GHz in a toasty 155W TDP. The entire Ryzen 9 lineup supports up to 44 lanes of PCIe bandwidth and four DDR4-3200 channels. There's not as much detail about the Whitehaven X390 platform, which will be soft-launched at Computex this month. AMD's Ryzen 9 ThreadRipper CPUs should hit the market in the US summer - which is June to August, for those of us not in the northern hemisphere.



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SQUARE ENIX

DAMN THIS PC NONSENSE!

White Christian males offended that white Christian males are villains

A white American Christian has put up a change.org petition to cancel or substantially alter the recently announced upcoming Ubisoft game Far Cry 5 due to the antagonists in the game being white American Christians. Gamers United, as the petitioner calls himself has a few suggestions for changes, including making the baddies Middle Eastern or "inner-city gangs", or at the least to make the white nationalist group be more racially diverse because ultra-nationalists are all about welcoming people of different colours and creeds. Other suggestions include making the violent, sexually aggressive villains into anti-heroes by making them a reaction to government overreach and taxation and to change the location to Canada or some other country so Americans can enjoy shooting foreigners instead of their own people.



In Gamers United's own words, "Us Gamers have had to endure a lot of crap over the last few years. The targeted harassment by the mainstream press through Gamergate, the terrible launch and outright lies of highly anticipated video games, the outright censorship of art through "localization" policies, the continued rejection of romantic partners

when they find out our hobby, the appropriation of our culture by so-called "gamers" on twitter. NO MORE!"

As of May 30, the petition had indeed united 124 gamers, the vast majority of whom only signed the petition to take the piss.

Yes, it is a slow news month thanks to E3 being just around the corner.



CRATES OF LOOT

Grim Dawn sells 1 million

Despite not getting as much press as some of the big failures or flashier games built with the help of crowdfunding, Grim Dawn, the spiritual successor to Titan Quest has proven to be hugely successful for developer Crate Entertainment, selling over one million copies. Arthur Bruno, founder of Crate Entertainment said in commemoration of the one million sales milestone, "It's crazy to think that this success story somehow arose from such humble and uncertain beginnings, overcoming so many setbacks and challenges. I repeatedly questioned what I was doing those first three, hard years of development. Looking back, I think the only thing that kept me

going on the bad days, was the responsibility I felt to see it through, for the people who had invested time in the project and those who supported us early on through our website. Even with that drive to see it through, no matter my doubts, the later support of thousands more backers on Kickstarter and Early Access, validated what we were doing and gave us a real shot at making the dream a reality."

The Crate team has grown since the project began back in 2012 and now comprises 14 developers. The team is currently finishing up work on a Grim Dawn expansion that introduces new areas as well as two new masteries, the Necromancer and the Inquisitor.



KERBAL SPACE EXODUS

Parts of the KSP dev team hired by Valve for as yet unannounced project

A number of the Kerbal Space Program dev team have been snapped up by Valve to work on an as yet unannounced game that definitely isn't Half-Life 3.



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MAYBE A COUPLE OF DRINKS, TOO*

Our fifth event was the best yet, with a record breaking number of stands all showing off lustworthy PC gear. As always, it was quite apparent that everyone who came along had a great time, with almost everyone leaving with free gifts. The biggest winner of the night was Alex Chong who took home the PC PowerPlay Beast PC worth almost \$7,000! Over the course of the night our master builder Josh Collins assembled the Beast using the very best components from In Win, AMD, Cooler Master, Aorus, MSI, G.Skill, Razer and Microsoft. This went down rather well, as you can imagine, so we're looking at doing this at every Upgrade Event, evolving the Beast as technology marches along – so be sure to come to the next one, which will be in Sydney later this year, and you could win the mighty Beast.

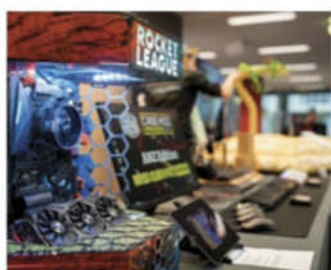
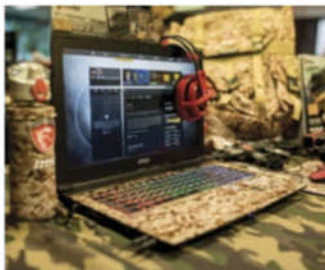
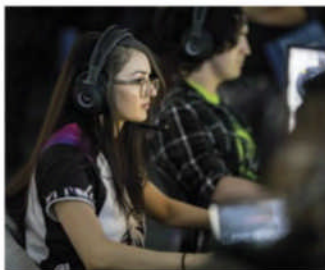
Case mods were a highlight, and their illustrious illumination and artisan craftsmanship dazzled the halls. Congratulations to Ethan, who won Best Case Mod, scoring the most votes from all attendees on the night. Ethan took home a Samsung 960 Evo 1TB SSD along with prizes from Eset including \$1,250 in cash.

It's always a treat for us to meet and chat to readers, young and old. Thanks so much to everyone that came along it was thoroughly enjoyable to hang out and talk tech and hear about what you are most interested in.

AMD attracted a lot of interest in the fabulous new Ryzen CPU, with staff fielding questions from attendees all night long. And of course we built a Ryzen-based PC PowerPlay Beast PC on the night so there was no shortage of Ryzen excitement at Upgrade Australia!

Asus showed off a wide range of gear including its legendary motherboards and monitors. Asus had its Aura Sync technology for all see, showing off a spectrum of RGB disco beyond anything else. MSI, too, dazzled with a huge array of booty, including a never seen before unveiling of a very





cool limited edition Camo Squad gaming laptop.

Over at Seagate the company demonstrated its cracking range of high performance Barracuda, Ironwolf, Skywolf and Firecuda drives. Razer had a great stand with loads of action and excitement, and we know people were keen to get their finger tips on the latest Blackwidow Chroma V2 keyboard, plus the Deathadder Elite and Kraken Pro V2 as well as the OSVR VR HMD.

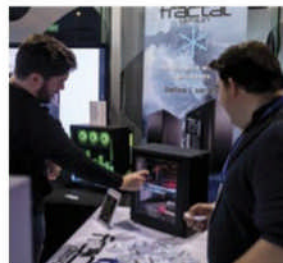
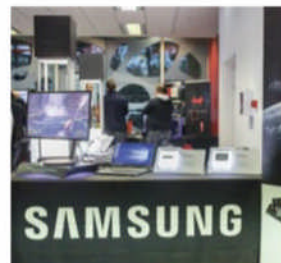
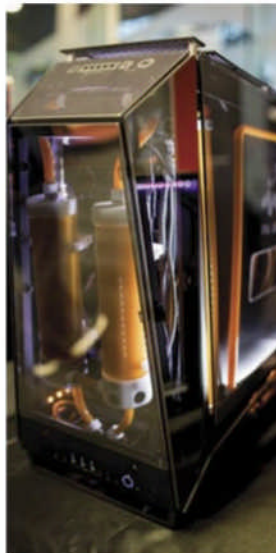
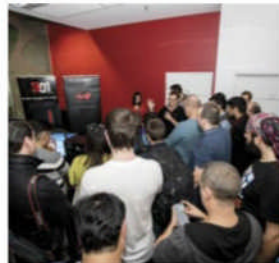
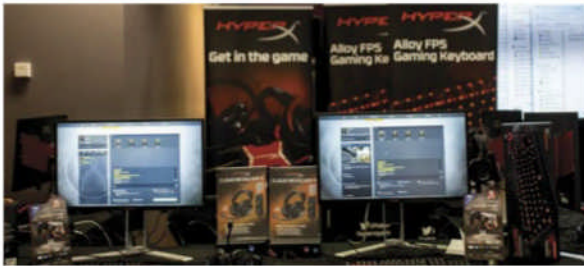
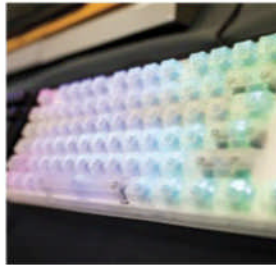
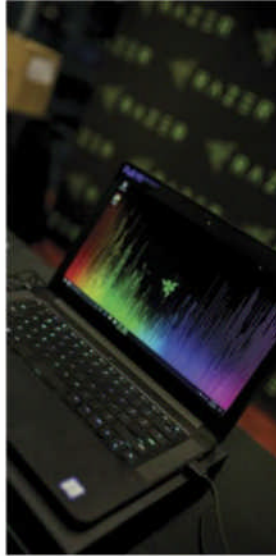
Aorus had the latest high performance gear and the legendary Dino was up to his usual tricks, giving the audience a great show. We also had Rectron, which is one of the main distributors to PC shops in Australia and it was fantastic to see people try out new gear they wouldn't otherwise be able to get their hands on. Rectron had the latest from Antec, Fractal Design, Galax and IG-Touch panel.

In Win laid out its gorgeous range of cases, including the magical Infinity case and the new tou 2.0. A pro-modder for In Win was on hand to give modding demos, too. Cooler Master had its first Upgrade Australia stand and it was a great chance to see and play with the keyboards that are very high in our list of favourites, plus entries from the Cooler Master Case Mod World Series 2017. PLE, as usual, brought something special along and it was a sim racing rig set up with an HTC Vive VR headset. Many tried VR for the first time that night and left with a smile. PLE also talked about its custom PC building services.

Samsung owns the high performance SSD scene, so it was terrific to have Samsung experts there talking about how its technology achieves such breathtaking performance.

Qnap had a top spread of NAS products for home and business, these guys are at the top of the game and we think everyone needs a NAS. Qnap's Hybrid Private Cloud was also there. HyperX had a focus on gaming to show off gear including the fantastic Alloy FPS keyboard and Cloud Stinger headphones, plus it was nice to be able to sit down for a while and hit a few rounds of CS: GO.

Another Upgrade Australia, another bunch of PC & Tech Authority and PC PowerPlay readers we met, who came, saw and likely left with freebies. And of course another great opportunity for the leaders in PC tech to lay on an extravaganza for you to all enjoy. Thanks for coming, we hope to see you at the next one so look out for announcements in the magazine and online at www.pcpowerplay.com.au and www.pcauthority.com.au – and subscribe to our free newsletter so you'll be the first to hear about it.



TAMING THE BEAST

Upgrade Australia 5.0 featured a little something extra not seen at previous Upgrade events. During the show, tech guru Josh Collins built a version of The Beast based around the recently released Ryzen CPU to give away to one lucky attendee.

THE BEAST IS RYZEN

Thanks to AMD, Gigabyte, MSI, CoolerMaster, In Win, Samsung, Seagate, Microsoft, G.Skill, ESET and Razer the Ryzen Beast is packed with top of the line gear. The core of the machine is a Ryzen 7 1800X CPU in a Gigabyte AX370 Gaming K7 mobo, sporting 32GB of G.Skill Trident Z RGB DDR4 3200 and an MSI GTX 1080Ti. The CPU is cooled with a CoolerMaster Master Liquid Pro 240. On the storage front, the Beast is no slouch, with a blisteringly fast 2TB Samsung 960 Pro serving as the boot and games drive, with a further two 2TB Seagate Barracuda drives for storage. For a case and power supply with gone with simple and elegant, with an In Win 909 Black case and In Win C 900W power supply. The excellent Razer BlackWidow Chroma V2 and Deathadder Elite round out the package. That's a \$6745 PC right there.

THE WINNER

The winner on the night was **Alex Chong**. We asked Alex a few questions about his win.

Tell us a little about yourself

I'm currently in my final year of an Electrical and Electronics Engineering degree, and I'm working on a VR based teleoperation



system of "Baxter the robot" for my final year project. I'm also an avid gamer, and I'm particularly interested in racing sim games.

Tell us about the PC you had before winning the Beast.

I only had a couple of laptops before winning the Beast, the main one I used is an older Clevo P150SM. It has at i7-4000mq, 8gb ram and a GTX 765m, so the Beast is a huge upgrade.

What's the first thing you are going to/have played on the Beast?

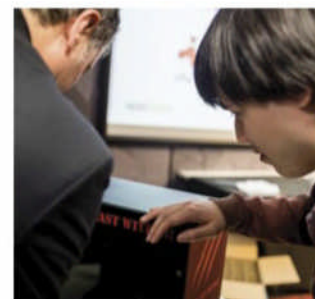
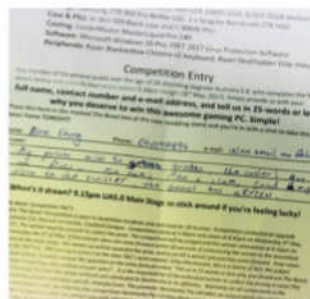
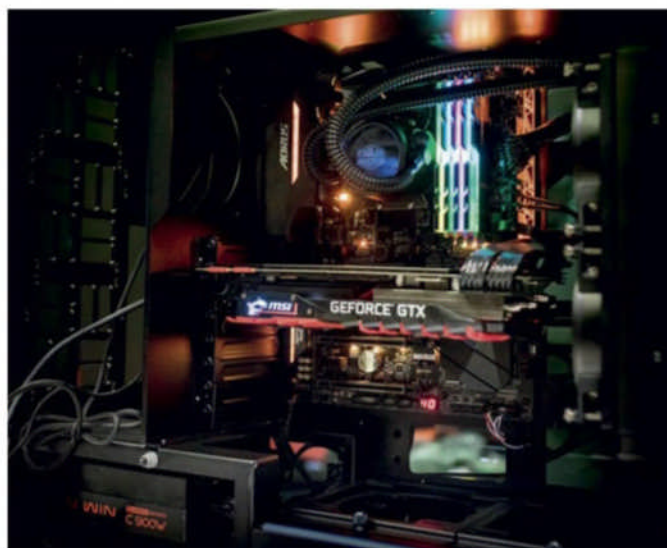
The first thing I did was to setup the Oculus Rift and then try out DIRT Rally on the headset. It works awesomely!

Has owning the Beast changed your gaming habits in any way?

I'll definitely be looking for more VR titles, since I can now use the latest runtimes for the oculus rift that I'm using for my engineering project, instead of being stuck on an ancient runtime version that I have to use to get it to work with my Optimus enabled laptop.

What are your plans moving forward?

I'll be using the beast to finish my VR teleoperation project. I'll be setting up virtualisation with GPU passthrough using an older graphics card, since some parts of my project require a Linux environment. I'll be able integrate the whole project onto a single machine if the passthrough works. I'll also be looking for a good quality 120hz+ monitor over the semester break, and probably organise a LAN session with some friends as well.



The Master of None

An army of AA games is set to usurp the hegemony of AAA – and Cliff B is leading the charge...

Clifford Bleszinski has clearly been reading this magazine. Back in issue 249 we pointed out that the current binary system of describing games as 'AAA' or 'indie' was insufficient, and we proposed a more granular scale to categorise games ranging from 'AAA' through to 'FFF.' Fast forward to April this year, when Cliff B addressed the Reboot Develop conference in Croatia, where he stated that the AAA business model is largely unsustainable, and that AA games are the future.

He compared the AAA gaming scene as it stands to the insidious march of globalisation, where identical chain stores and restaurants erase all regional distinctiveness. "They're not bad, but they're not great. They're just kind of there. Salad and bread sticks. Whee." He pointed out that companies like Sony can pour millions of dollars into console-selling games that don't even have to make a profit, which in turn gets gamers hooked on the very highest quality graphics and gameplay. If you're a game developer, and you're not a Sony or an Activision, these customer expectations are problematic.

"So, what do you do? I'm proposing that if you want to make games that aren't just indie darlings or cool little VR experiences, is this new idea of not Triple-A, but Double-A." As examples, he cited Warframe, Rocket League, and Rust. "These games that look and play great, but they pick their battles in regards to budget and marketing, and they're also digital, and reasonably priced or free-to-play. And that's kind of what we're gunning for with LawBreakers."

Cliff B also talked about the way his



haircuts have evolved over the years. He describes his current look as 'Trashy Pitbull,' which he asserts is better than his old look which made him look 'like someone out of a condom ad.' It's a highly informative talk, and well worth tracking down on Twitch.

But what does it mean to 'pick your battles'? In what key ways do AAA and AA games differ? Cliff B stated that for LawBreakers his team is concentrating on 5v5 multi-player – they didn't even bother with a story campaign. It seems like an obvious decision now, but it's one that many devs have struggled with for years. There is simply no point

This wastefulness in game development is reminiscent of the psychological phenomenon of 'Displacement Activity.' A pigeon, uncertain whether it should fight or flee an aggressor, might compulsively peck at the ground or preen itself instead of doing something constructive. In the individual, displacement activity hints at confusion or stress. For an organisation, it is a sign of dysfunction. The classic example is a re-branding exercise. THQ put on a big song and dance about how they had re-designed their logo shortly before they went out of business.

At a meta level entire games can be a form of displacement activity, so long as superior products exist. The endless, tiresome grind of Destiny and The Division is almost like a drug habit, shackling the very souls of their afflicted players. To think that there are YouTubers out there who actually offer guides to these sorts of games, serving as enablers to mediocrity. When someone dangles out a carrot of false hope, that these games can eventually become fun if you get good at them... it's almost evil. But a banal kind of evil, like working as a political staffer, or at a merchant bank.

But back on topic: Another point that Cliff B made in his talk was that when you're a new studio you only get one chance to make a big splash. The sobering example he gave was Raven Software and Singularity. The subtext: If LawBreakers fails, Boss Key Productions will fade into obscurity. So keep an eye on Cliff B's social media output. If he starts talking more about his haircuts than about his game, then you'll know it's in trouble... **PC**

Double-A games look and play great, but they pick their battles in regards to budget and marketing

in creating a story mode when multi-player is the core of the game, and vice versa. It costs millions of dollars to tack on modes that are ultimately just a distraction.

An extreme example would be to compare, say, House of the Dying Sun with Star Citizen. House of the Dying Sun is a pared-back, bare-bones space combat simulator reminiscent of the old X-Wing Vs. Tie Fighter games. It offers a modest selection of short, intense dogfighting missions and literally nothing else. Meanwhile the harried Star Citizen devs are modelling everything from office furniture to working toilets, and the space combat side of things, ostensibly the beating heart of the game, has kind of fallen by the wayside.



JAMES COTTEE is currently writing a book titled *Hairstyles of Famous Video Game Developers*

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A ROMAN HOLIDAY



What happens when you combine the historical rigour of Total War with the addictive free-to-play progression of World of Tanks? We talk to Wargaming's **TATSIANA MARTSINOUSKAYA** and **JOSE EDGARDO GARCIA** to find out...



WHO TATSIANA MARTSINOUSKAYA AND JOSE EDGARDO GARCIA
WHERE WARGAMING ALLIANCE
WHY TOTAL WAR: ARENA

We recently had the chance to sit down with an alpha build of Total War: Arena, a collaboration that brings together the historical tactics of Creative Assembly's flagship game series with the free-to-play business model that has made Wargaming.net a global gaming juggernaut.

We also had the chance to talk with two people instrumental in bringing this project to life: Tatsiana Martsinowskaya, Wargaming head of marketing for APAC, and associate producer Jose Edgardo Garcia. As Tatsiana told us, this project has been in the works for a couple of years now. "It started back in 2015 when we met with Creative Assembly at Gamescom. At that stage we already had ideas about approaching third-party publishing, but we hadn't given them insight as to what kind of expertise we could provide. At the same time, Creative Assembly wasn't sharing that they were working on a free-to-play title. We had a very good impression after that meeting, and we stayed in touch, so as soon as we shared that we were actually ready to go third-party publishing, and that we want to share our expertise in delivering games globally, this is how it started."

Jose told us that Wargaming was lending a wide gamut of expertise relating to the publishing of free-to-play online games, especially with regards to specialisation for local markets. "Monetisation, e-sports, and developing meta-games of games. These are some of the specialisations we want to share with Creative Assembly in making Total War: Arena."

This is no small body of knowledge; Tatsiana was quick to point out the importance of Wargaming in advancing this business model around the globe. "Let's not forget that Wargaming is a company that actually brought free-to-play

to the Western market. From Asia, where it initially started. With this monetisation model we made World of Tanks a cultural phenomenon for some of the countries in Europe. This is the expertise we want to share, because now we are talking about making Total War multiplayer, online, so we want to address a bigger audience. And we are ready to help them in approaching this bigger audience."

Any fan of World of Tanks or World of Warships would feel right at home with the way matches and game progression have been organised. In the build we played all

■ ■ We want to make sure that the game is good, that the game quality is really high, before we start talking monetisation. ■ ■

units had been organised into tech trees ten tiers across. Echoing the way you unlock a new turret or engine, these ancient archers and spearmen can be upgraded with better armour and weapons before you unlock the next tier. We noticed that one of the unit types was a company of Druids, but Jose assured us that there will be no magic in the game – it looks like nobody's going to be chugging Getafix's magic potion.

When we touched upon the topic of monetisation, Jose was reluctant to give any firm details. "Bottom line: free to play. Free-to-play model. Right now, the game's quite early. We want to make sure that the game is good, that the game quality is really high, before we start talking monetisation. One example is

we're actually testing premium units. And when it comes to the progression, the progression tree, I can tell you that it is quite similar to World of Tanks. The basics of the monetisation is there. And, again, they're in testing. So we can't say: 'Yep! That's going to happen when we release it.' But to give you a general idea, it's similar to World of Tanks."

Reading between the lines, one could infer that players will be able to pay for Premium Time to accelerate the interminable 'stock grind' at higher tiers. It's certainly very early days for the project; as Jose told us, far too soon to be speculating about ports from PC to Linux or Mac. "We are open to these opportunities. To these avenues. It's just that right now we want to make sure we make the game right first, and then we'll talk about it later."

And while Wargaming is keen to get a beta out the door as soon as possible, they're not going to rush CA. "We want to make sure they're working really, really hard, concentrating on what they're experts on. We're not going to tell them how to make a AAA game. That's what they know how to do." Jose couldn't give us any concrete info on their progress on that front, beyond the fact that they were at 'Alpha Stage Six.'

As for the game mechanics, Tatsiana praised the accessibility of the interface, while Jose, a big fan of artillery in World of Tanks, told us of his love of catapults. WoT veterans will be familiar with the thorny issue of balancing self-propelled guns – some even refer to artillery as 'Sky Cancer.'

Jose told us that they're definitely on top of this issue. "When you play the game, you actually control three units. It's like a complicated rock/paper/scissors thing. So the thing is, the catapults, the siege engines, are really ye olde time tech. And definitely not that accurate [chuckles]. And



this has been a very important thing to balance, even in the earlier alphas.”

To illustrate how catapults are not over-powered, he pointed out that each player controls three units, each consisting of up to 100 men. This results in much, much bigger battles than a 15 vs. 15 WoT skirmish. “We’re talking 3,000 versus 3,000. So I’m pretty sure that if you’re controlling 300 infantry, a lot of them are going to make it to the siege engine before they kill everyone. They’re really more of an area suppression thing, than actual direct kill.” Cavalry in particular is quite effective at rushing siege engines. “They can easily flank you. And once they get close, you’re dead.”

Map awareness is far more important than in WoT, in no small part due to the morale system. “The soldiers have morale. So if you attack them face to face, forward, it’s a normal battle. But then you get your other unit flanking around, and hit from the side, soon you see that morale drop, drop, drop, and then even though the unit’s still intact, they start retreating. It does that.” Terrain type will also have a huge impact, with some units able to hide in forests or tall grass.

Jose told us that there would be three factions at launch: the Romans, the Greeks, and the Barbarians. “We want to balance these first, but we definitely want to add content later down the line, because you can’t just have that. So, those three. And we have different commanders and units for each of them.” In the build we played the Roman commanders were Germanicus, Scipio Africanus, and Julius Caesar. The Greek commanders were Leonidas, Alexander the Great, Miltiades, and Cynane. The two Barbarian commanders were Vercingetorix and Arminius.

Each had their own special abilities, their use limited by cool-downs. Leonidas’s ‘Fight in the Shade’ ability increased his troops’ resilience to archers, while Arminius could temporarily disguise his men as enemy troops, a call-back to his historical role as a turncoat from the Roman ranks.

“Why did we pick them? We didn’t. Creative Assembly did. It’s their baby. The adding content part is, that’s where our specialisation comes in. ‘Hello Creative Assembly, our region wants this, maybe you can add it,’ and then they’ll think about it, do their research, and get feedback. And if it’s worth it, add it.”

Jose told us that Wargaming is keen to do an anime tie-in promotion, along the lines of the World of Warships and World of Tanks cross-overs with High School Fleet and Girls und Panzer. The only problem is that they’ve been struggling to find a show that would be a good fit for the setting. At the time of our discussion, the closest match they’d found was *Thermae Romae*, a show about a chap from Imperial Rome who visits a bath house and somehow warps through time and space to a bath house in contemporary Japan. Boggled by modern technological convenience, he tries to take this tech back to ancient times – hilarity ensues.

Jose stressed that there’s no guarantee that this specific anime will work its way into the finished product. “At this stage it’s really more of a proof of concept.”

For more details, visit totalwararena.com.

JAMES COTTEE 

Your Guide

If someone's going to spoil your game, you'd better make sure they do it exactly how you like it.

I have a confession to make. The hefty Prima guide for Baldur's Gate 2 did not leave my side, basically from Chapter 3 right to the end of that gigantic game, on my first playthrough. I still had to fight the dragons, I just knew which toilets to look in, for diamonds. More importantly, the guide explained that when a vampire hits you, it drains levels. I honestly didn't know why my characters were getting weaker and stupider, nor that there were ways to both rectify this and protect against it. I may have even restarted the game.

In a sprawling RPG that's full of rules, people who want guides probably just want to know how to play and that they're not missing any great loot. Also, the feeling of, "I seriously do not have time to get lost in this game," I had while playing The Witcher 3 saw me bookmarking Brenna Hillier's guide on VG247. She tells me it gets a lot of hits, even now. I was asking her about process because I recently made a Universal Hint System style guide for Thimbleweed Park in Twine. No immediate spoilers, only incrementally more explicit hints.

Basically, I couldn't stand the idea of people looking for small hints to my favourite ever adventure and getting full spoilers by searching for a YouTube Let's Play or full walkthrough. It's like when Dragon Age 2 had no item descriptions and I got so sad that I wrote 23,000 words about armour and swords. Fan projects are weird. I've never really understood cosplay, for example, but I imagine once you're gripped by the need to knit chainmail, it's hard to shake.

My guide was already at 1000 total unique visits when I noticed several



of the Thimbleweed Park developers tweeting about how players should cherish the pre-walkthrough first week after release. It gave me pause to consider how I actually felt about providing hints. Seeing people asking for hints on the Steam forum and getting full spoilers broke my heart, then steeled it, so I started promoting my Twine more rigorously. Then, a few days later, three of the designers tweeted my guide and one even pinned it.

Guide creators always seem frustrated, although understandably, by people copying their work without attribution and I rarely see a connection with the people they're

to Civilization IV with optimal civics combinations for every early and late game strategy, as well as ideas for how to manage a range of human opponents. In this case, the game's depth makes the guide's creative sections really shine. Sometimes, the guide is even more enjoyable than the game. I'm sorry to say that I was hanging off every word of Arcanum: Of Steamworks and Magick Obscura's manual in a way that the game never quite matched.

Should people feel guilty for needing, or using, game guides? The adventure genre seems to suffer from the, "Do it without hints," mentality, but it's probably less to do with old-school elitism and more because adventure players understand that figuring out puzzles is what makes you feel good. When I was reviewing Thimbleweed Park before release, I asked the very attentive PR contact for two tiny nudges. Asking a real person is prohibitive, which helped to ensure I didn't crack before getting properly frustrated. Proper frustration is when you should crack.

I have another confession to make. I never made it to the end of Planescape: Torment. However, I did recently see a game guide for it, written by Chris Avellone. Then last week, a review key for the enhanced edition landed in my inbox, so perhaps it is a sign. Meanwhile, if you're stuck in Thimbleweed Park, but only if you're truly frustrated, come and play my Twine; You Deserve Tiny Incremental Hints for Thimbleweed Park on philome.la. Have you looked in the ...? And you'll know what to do without another word. 

■ I imagine once you're gripped by the need to knit chainmail, it's hard to shake ■

writing their guide for. It seems more like, "Look, I did it first."

Making my Twine for Thimbleweed Park hints was time consuming and difficult to test, but I loved the process. Indeed, the first thing I ever wrote for PC Powerplay was in assisting another writer with a game guide for The Sims 2, where we dug into optimal play styles. People on the internet can endlessly and pointlessly spoil games, but a guide that enriches your experience of the game is gold. Interestingly, I noticed someone has catalogued the locations of TWP's nearly 900 backer written books in the mansion library. Niche, but amazing.

And, great games inspire great guides. I have a Bradygames guide



MEGHANN O'NEILL
got a hint for Thimbleweed Park which was literally, "Who ..." and she knew what to do. Adventure games can be like that.

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A Collection Aside



Should games have stories, should stories be games? These questions somehow persist. This month, **MEGHANN O'NEILL** played games including stories, games where stories detracted from the game and games where the story was the game, sort of. The answer to whether a game should either have, or be, a story is likely highly context specific, and that's the only answer we really need. Now, should a game's story be set to music? Well, that's an easy one. Absolutely!

DOMINIQUE PAMPLEMOUSSE (1 AND 2)

DEVELOPER SQUINKY
PRICE \$5
squinky.itch.io/dompam2

I knew Dominique Pamplemousse in "It's all over once the fat lady sings!" was an adventure game, delivered as a Broadway musical, so I really should have found the time to play it before now. What a convergence of things! My impetus came in the form of its recently released sequel, and I've now played both. Dominique Pamplemousse and Dominique Pamplemousse in "Combinatorial Explosion!" is about two versions of the main character questing together to discover which of them is canon, after the original game diverged at its ending.

Although I love this concept for many reasons, I especially appreciate how it provides the perfect opportunity for the Pamplemousses to sing in harmony. In the first game, characters largely vocalise their thoughts and feelings, as well as items found in the game, as soloists. Musicals often establish melodic themes for characters and events, then tie them all together into one coherent showstopper. Certainly, it's nice to hear content expanded vertically. There is even a barbershop moment, cleverly stemming from an early game choice.

If you're familiar with the first game, the second is less of an adventure, more of a reprise. You'll progress through scenes by choosing dialogue, and see both new and familiar faces, but there's nothing to solve, as such. Like in any great musical, you'll find you can sing the choruses to songs



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the first time you hear them. I still have Everyone Poops stuck in my head, right now. When I selected the dialogue suggesting a "fart solo" I didn't think I'd actually get one.

Both of the games made my ears feel like they'd been given a warm bath and a hug. Assuming the developer recorded most of the music, I'm amazed by how in tune and in time the busy brass ensemble always sounds,

continued vamp when the lead character in the high school show trips over a curtain.

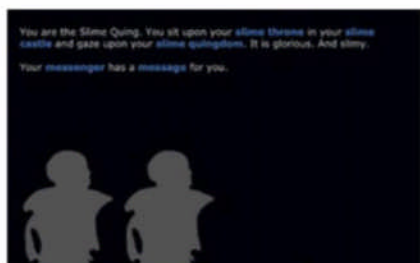
The games are short but, given how long the music must have taken to craft, appropriately so. Think of these experiences as quality over quantity, like one Vandoren reed over a thousand Ricos. (I would have made a brass/euphonium analogy, but I'm a saxophonist. It'd probably be clef related.) Luckily, you can select scenes from the main

Like in any great musical, you can sing the choruses the first time you hear them

as well as how perfectly the singing parts work, above this looping base. Structurally, the music unfolds as if the ensemble is waiting for you to choose the next line that needs to be sung. I, myself, have had to whirl my conducting fingers to indicate a

menu because the bathroom scene needed several encores. It's sung by a sliver of soap who is dying and trying to decide who to stick themselves to, in order to pass on their legacy.

So, if you haven't played either of the Pamplemousse games, now is a great time to get both. If you've played the first, don't expect more of the same in a gameplay sense, but expect even more, musically. It's also more of a way to remember characters and settings rather than a discrete story. I wasn't disappointed by the ending. If you finish the game, you'll understand why I say that. I'm just sorry I didn't play the first game years ago. For the gamer-musician, these need to be in your library.





FORTS

DEVELOPER EARTHWORK GAMES

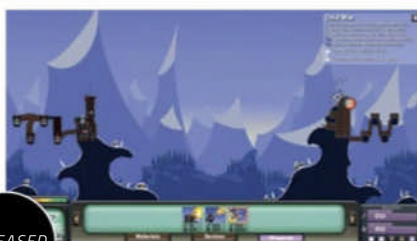
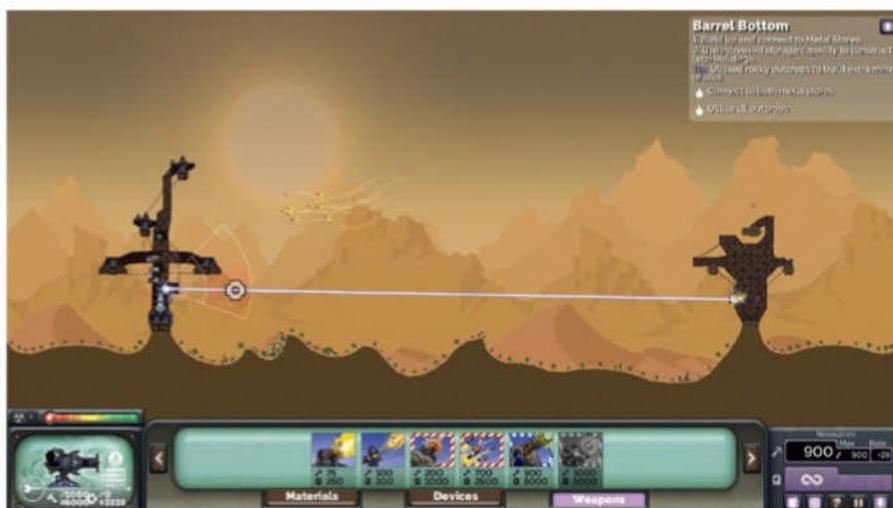
PRICE \$15

www.earthworkgames.com

Oh, Forts, how I loved this game when I previewed it for PAX 2015. It's now at full release and I still love it, with a few caveats. The core mechanics are the same, with the chaotic building of structures, the incremental tech/weapon development and those perfect moments where you fluke a one-shot takedown of an enemy behemoth, by finding its tiniest, weakest spot. An enjoyable campaign has been added, even if the writing doesn't support it very well, and there are lots of single/multiplayer options, even if it crashes a lot.

My favourite mode is when two players control the same fort, delegating building and offensive/defensive tasks. Like, who should place the incendiary mortar? The designer of the structure or the one who is using it? When is bombardment sufficient enough for the builder to take control of weapons, too? Who is allowed decide what to build next, knowing that resources are precious? Whose fault is it when there isn't enough energy to go around? It's hard to make these interlocking decisions with one brain. Two brains complicates matters even further.

Forts really shines when different



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approaches, within a range of maps, starts and scenarios, can make the difference between success and disaster. The quicker you build, the more likely you'll create a wobbly structure, but it needs to be tall to optimise harvesting energy. If you're going to add heavy armour to the front, will enemy fire ricochet somewhere useful, and will you have the resources to mend it when hit? Most build decisions are relatively clear cut, even when hastily made and risky, until you start adding unwieldy bridges, to access something special.

Similarly, is it worth rushing to launch mortars if the enemy can already intercept shells with machine guns? Is it worth upgrading a sniper, to puncture armour, if

they can no longer paint targets for your missiles? Although it might be tempting to rush straight for the expensive heavy weaponry every time, like lasers which consume massive amounts of energy and can obliterate most strong forts in a few hits, there's often a clever solution to be had, with the right weapon, carefully placed, or a weight bearing rope to be burned, if you can see it. (Forts is unpausable.)

There was no story the last time I played, though. There is now and, in my opinion, it detracts from the game. I'd skip it if it weren't interwoven with necessary instruction. It's basically real world powers, under thinly veiled aliases, competing for the world's last oil resources in ever cynical scenarios. Also, the crashes are not insignificant, especially in multiplayer. In singleplayer, I certainly experienced the joy of cleverly winning a map on the second try, then the despair of having to play it a third time, due to the game hanging at the victory screen.

If it sounds like I'm at all disappointed with Forts, this is only because my expectations were extremely high. I think you'll appreciate the way every match feels as if it's incredibly precarious, with either fort likely to explode at any moment, while also understanding the chains of incredibly detailed choices that led both players to this point. Just find someone to play against who will give you a 30 second grace period when your poorly cobbled together bridge falls on top of your machine gunners and wipes them out.



THE INNER DARKNESS

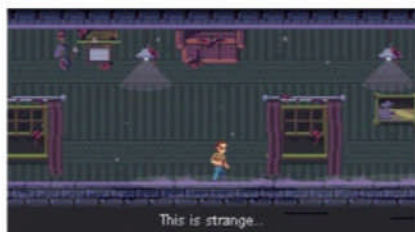
DEVELOPER NAURIS AMATNIEKS

PRICE \$5

store.steampowered.com/app/562160/The_Inner_Darkness

No, I'm not bored by platformers with one unique element, as yet, despite there being so many. Sometimes your play experience surprises you in ways that are difficult to anticipate. The Inner Darkness advertises itself as a platformer with a "dimension switching mechanic." It is exactly that, but I found that what I enjoyed even more was the sick feeling given to me by the storytelling, mostly ambient. You're confused and you have a terrible wound. The contrast between, what seem to be, vivid memories and your present reality is stark and distressing.

Mostly, you're navigating through locations and sometimes there are knives,



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bridges or obstacles in one dimension that aren't in the other. You can switch between them but are only allowed to stay in the brighter place for a measured time. The best puzzles involve manipulating crates and "cubes made of guts" between places, to achieve a cumulative path to the next level. Occasionally, expectations for the genre are subverted, like with a boss battle conducted while sliding down a long, 45 degree angled platform.

You also navigate past playgrounds, homes,

gigantic pills and disturbing posters of sexy ladies with their heads mashed in. The sound design is enough to give you a headache and the screen shakes, fades and floats nauseatingly. Interestingly, I wouldn't describe the story as detailed or even particularly satisfying, but it really kept me playing. I feel as if this is a game which really understands that the journey is more important than the destination. I'd recommend it to people who need another platformer and some inspiration for ambient storytelling.



KIMMY

DEVELOPER NINA FREEMAN

PRICE \$10

ninasays.so/kimmy

Kimmy is a visual novel in which you spend a summer babysitting and teaching local kids to play games. There's a warm and timeless feel to the setting, although certain details firmly root the action in 1968, like discussing who has a TV and what's on at the cinema. Narrative themes including love, honesty and racism are touched on, but really this is the story of an unlikely, but very important, friendship. Although the characters are children, you might want to play through yourself, before deciding whether your children should play.

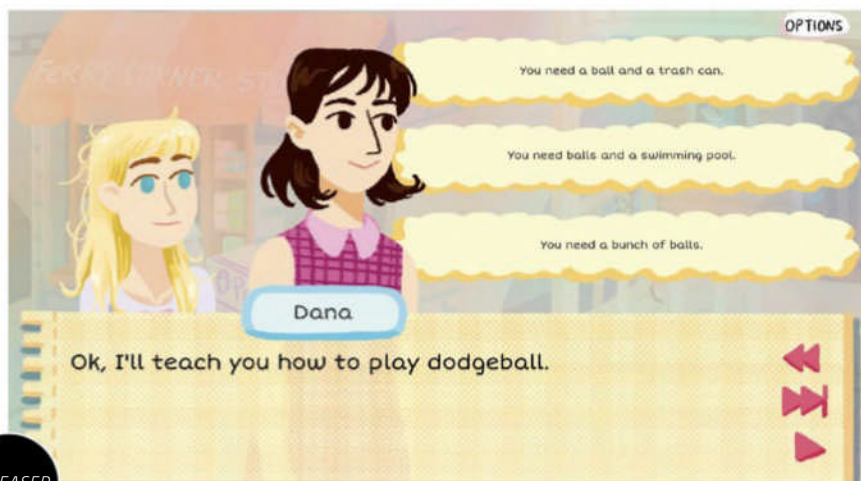
Pre-teen Dana, having been told that babies are given by God, mistakes a young



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girl on the street as a baby for her. She organises to look after Kimmy over several days and the player navigates four locations, choosing which of the neighbourhood groups to spend time with. You don't actually play the games you're sharing, like hopscotch and apple bobbing, you just buy the items required and describe them accurately to proceed. Each simple, but compelling, kid will tell you about their life, from the girl who loves animals to the harsh bully.

Sometimes, you'll get a cutscene between days to advance the main plot. At one point a character mentioned a detail about someone that I hadn't noticed. I immediately went to look at screenshots I'd taken of the game and realised they were correct. This story is framed as a mystery, but it's also quite transparently obvious as to what is happening. Player agency and lack of control are nicely balanced. As told by young characters, don't expect complicated or inspiring dialogue, but it is a story worth hearing.



MOON HUNTERS

DEVELOPER KITFOX GAMES

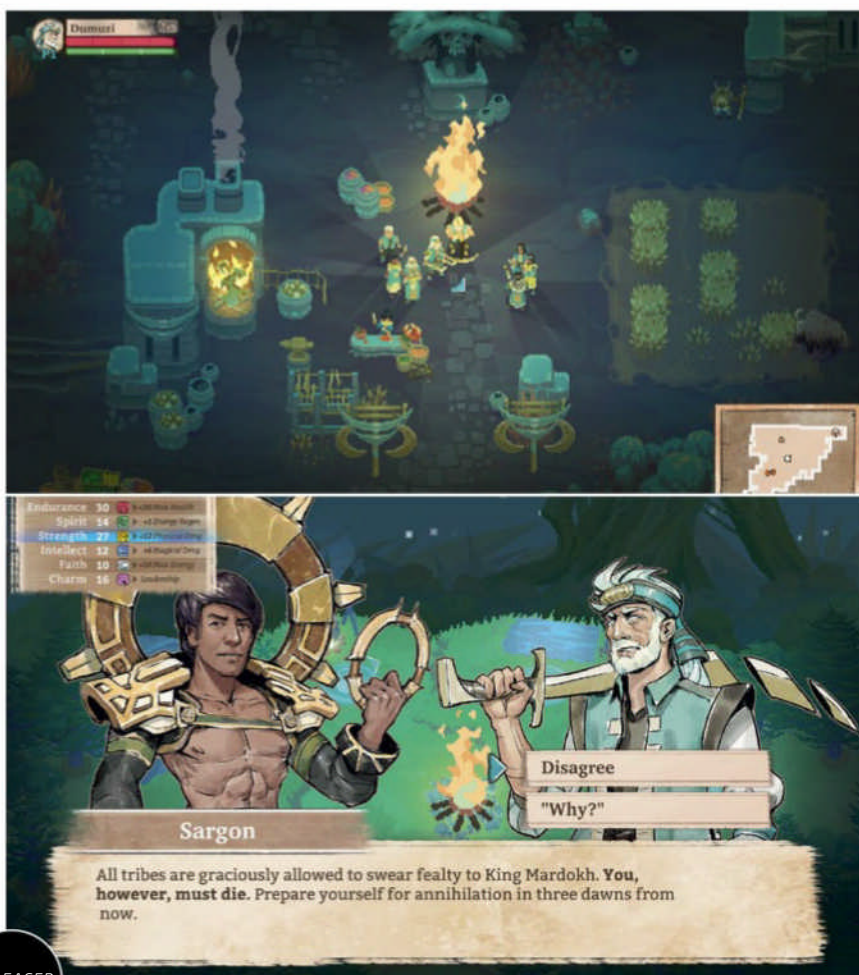
PRICE \$15

www.moonhuntersgame.com

I like to think I am able to describe games in accurate and evocative ways myself, but sometimes the official elevator pitch is worth repeating. “Co-op personality test,” is certainly one aspect to Moon Hunters. More, it’s an exploration of how roguelike narrative can evolve into a complex and beautiful mess, through the eating of every combination of foods, good luck and repetition. Like in Out There, by Mi Closs, a story is revealed, and understood, based on how many times you’ve played the game, rather than any given sequence of events.

This relies on the idea that legends are different in how people remember them. Each playthrough is a retelling of what happened in the five days between when the moon didn’t rise and the Sun God wrested control of the land. You can have a meaningful impact on how the narrative plays out, but not immediately. At the outset, you’re simply one of many heroes in one of several unlockable starting locations, exploring procedurally generated locations and finding secrets. Or, you’re one of two to four heroes, this time around. Playing co-op is incredibly fun.

The choice of hero/es determines playstyle and statistics. Each of several has an attack, a supportive ability and a movement buff. So, if you’re a Spellblade, you’ll have a quick attack that gets quicker as it chains, Shockwave to push enemies back when they’re overwhelming and Dash to engage ranged opponents. The Ritualist combines



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teach their speciality in a given game. I particularly like how sleeping restores hitpoints but also charm. Well rested people are nicer, it’s true.

Is this stat boosting more than aesthetic, and actually meaningful? Not for a while, but yes. Again, it’s

change your personality. This will influence both how you are remembered on a given playthrough, as well as allow for extending certain options for the narrative.

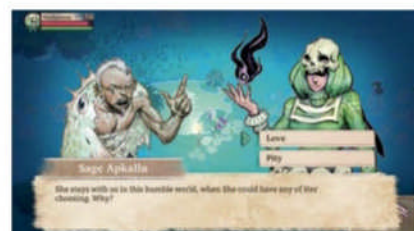
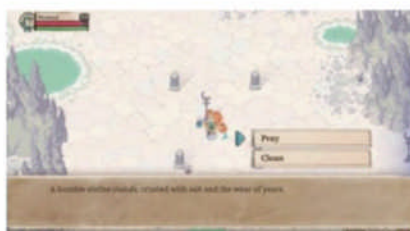
Exploring Moon Hunters made me feel like I was playing Baldur’s Gate for the first time, even though it is nowhere near the size or scope. I’d argue it doesn’t need to be, with depth being realised in an entirely different manner. As with Out There, sometimes the thing you desperately need just doesn’t appear this time around and you have to be content with exploring what you do have available, or eating cheese combined with every other thing. I can imagine this structure annoying some, but I think it’s experimental, deep, exciting and I love it. **PC**

an exploration of how roguelike narrative can evolve into a complex, beautiful mess

a ranged attack with a Void Pull and Teleport, and so on. Creatures vary in speed, size and attack style, so complexity comes with the way your party imagines strategic approaches and progression through different locations.

If you’re all killed or clear an area, you retreat to camp. Here, each person gets to decide how they will spend their evening, with the aim of boosting statistics and tweaking personality. If you’re stargazing, you’ll likely boost intellect, for example. Making combinations of culinary ingredients into delicious sounding foods allows for boosting everything, but only after you’ve happened across whoever will

about using the roguelike structure to compound story until you understand your eventual aim, overlooked so many times before. Funny moments of falling asleep at your post or binary, and sometimes unusual, choices for resolving puzzles along the way can



BEST OF BOTH WORLDS

SSDs may be all the rage, but if you're a die-hard gamer with a massive Steam library, you just can't fit all those games on a single SSD without paying thousands of dollars for a large capacity version. This hybrid SSD and HDD is perfect for gamers who still want loads of space for all their games, but also require fast SSD-like loading times. These combination SSD and HDD units are called SSHDs (solid state hybrid drive). The FireCuda is paired with a 7200RPM drive with a 256MB cache, so even if the data you need isn't on the SSD, it'll still be fairly quick to access, as opposed to the rather sedate 5900RPM drives with much smaller cache currently available. The FireCuda combines an 8GB MLC SSD with 1TB or 2TB HDD so you can enjoy the best of both SSD and HDD worlds. Seagate provide a 5-year warranty on the FireCuda SSHD, giving you peace of mind that any trouble you face will be taken care of.

MAXIMUM PERFORMANCE

Performance on an SSHD is much faster than a standard HDD, with game load times 5x faster and boot times in seconds instead of minutes.

An ideal application for an SSHD is in a small form factor gaming rig where there just isn't space for two drives, but you still want a fast, large disk for your games. The main benefit of the FireCuda is that no setup or drivers are required to make full use of the SSHD features. It simply appears as a single, normal hard

“The FireCuda combines an 8GB MLC SSD with 1TB or 2TB HDD so you can enjoy the best of both SSD and HDD worlds”

drive to any operating system. With a RAID setup, there's always setup or drivers required that can sometimes cause issues. The FireCuda's Flash boost is automatically configured and arranged by the drive's on-board hardware controller. The FireCuda intelligently decides what files, applications and operating system components are accessed the most



often and moves those to the SSD for quick access. It'll also move items back to the HDD if they're no longer required. Both the BarraCuda and FireCuda storage solutions from

FIRECUDA ADRENALINE

If you're in the market for a new, fast drive, now is the time to shop. If you buy and register a FireCuda by June 30th from one of the participating resellers listed below, you enter the running to win \$250 worth of Adrenaline vouchers. For those unfamiliar with Adrenaline is a leading seller of gift vouchers and unique experiences in Australia, ranging from the extreme, like skydiving or a V8 Supercar experience, through to the more relaxing, like fine dining and wellbeing retreats. If that sounds like your thing, participating resellers are: MWave, Centrecom, PLE, Computer Alliance, Scorptec and PC Case Gear.

www.seagate.com/au/en/promos/anzpromotions/firecuda/



OZ MODZ SEAGATE FIRECUDA CASE MOD

- The front panel and structure was heavily cut and modified to accommodate a mirrored acrylic section with a slow rotating drive. This was top lit with Cablemod LED's to provide a very unique viewpoint and angle with multiple reflections back to the rotating drives.
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"The FireCudas are worthy of this effort. As a gamer and a PC enthusiast I'm often looking for products for myself and client builds that can provide great value for performance and these diverse products that fill more than one need is essential in my PC's. The drives are up to 5 times faster than a standard harddrive yet have the larger 2tb capacity. A true hybrid gaining the best of both worlds."

Stephen Hoad

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 SEAGATE

10

to Watch



Hyper Jam

DEVELOPER BIT DRAGON
PUBLISHER BIT DRAGON
DUE EARLY ACCESS
hyperjamgame.com

▼ Imagine a multiplayer brawler filtered through the lens of '80s neon art all set to a rad synthwave soundtrack. That's Hyper Jam in a nutshell. Two to four players choose an '80s inspired character, any of whom would have looked at home on the cover of a Cyberpunk 2020 supplement book, grab weapons and fight to the death in a number of arenas. It's fast, furious and the fact that powerups can stack makes combat some glorious chaos. It's also Australian made.

1



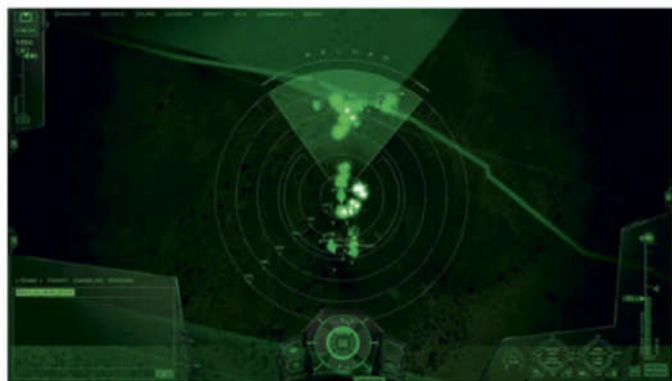
Hellhunter

DEVELOPER BALLISTIC INTERACTIVE
PUBLISHER BALLISTIC INTERACTIVE
DUE 2017
hellhuntergame.com

▲ Hellhunter promises to be a different kind of horror game. Rather than being a victim or accidental protagonist, players instead take the role of a professional supernatural investigator. Players stealthily search procedurally generated levels for clues as to the type of threat they are facing, making sure not to rile up too much in the way of supernatural opposition before using the knowledge gained to tool up for a confrontation. Think the monster hunts in The Witcher 3 meets Supernatural.

2



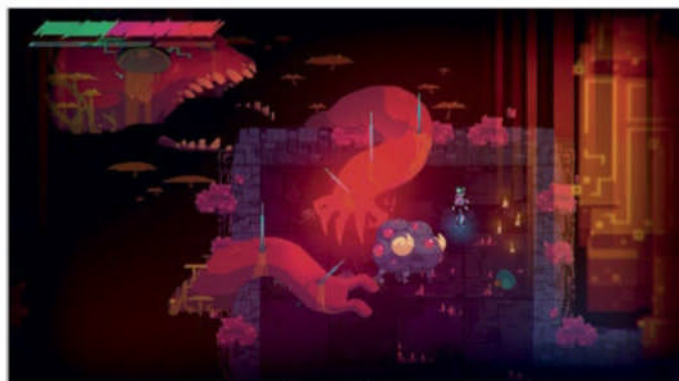


3

Road Dogs

DEVELOPER TELETOWER STUDIOS
PUBLISHER TELETOWER STUDIOS
DUE AUGUST 18, 2017
roaddogs.online

▲ Inspired by early open-world trading and combat games like Elite, Sea Dogs and Sid Meier's Pirates, Road Dogs is a beautifully low-fi car wars MMORPG. Buy and customise vehicles, destroy trade caravans and enemies for salvage, do generated quests for NPCs dotted around the wasteland, trade, drive and survive. If you've ever played an early submarine or naval combat game you will recognise the look. We think it's stunning and can't wait to get struck in.



4

Phantom Trigger

DEVELOPER BREAD TEAM
PUBLISHER TINYBUILD
DUE 2017
phantomtrigger.com

▲ Not the Japanese visual novel, or an element of some of the Blazblue games, this Phantom Trigger is a fast-paced, top-down neon-soaked Rogue-like hack and slash RPG featuring a hero that may or may not be insane fighting battles across surreal landscapes that could be a figment of his imagination. Do you have what it takes to guide Stan through the twisted world, unlocking new abilities and combos through branching storylines?

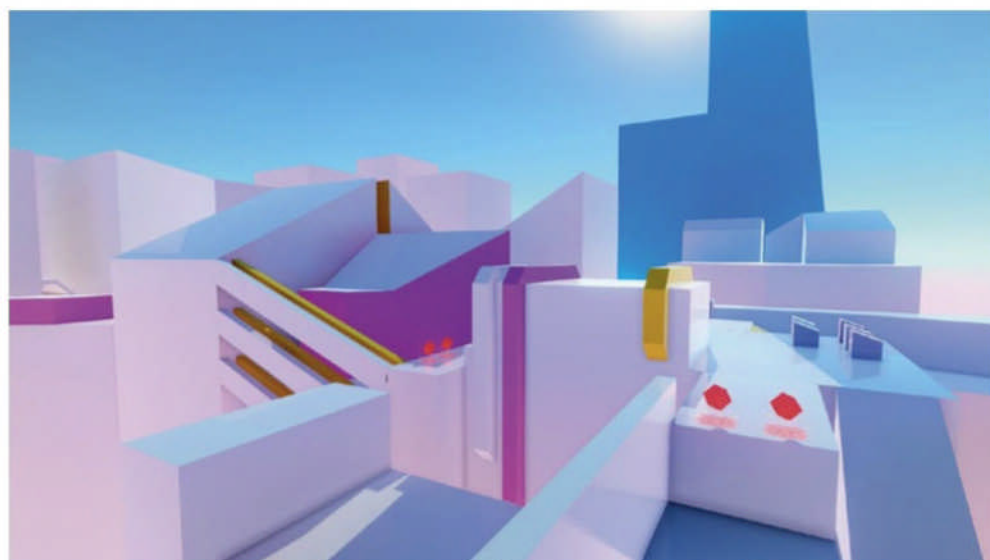


5

Sparkour

DEVELOPER REELINE STUDIOS
PUBLISHER REELINE STUDIOS
DUE 2017
reelionestudios.com

◀ The best parts of both Mirror's Edge games, despite what EA seem to believe with them shoe-horning in as much combat as possible, were those parts that just allowed you to run. You could fly across the rooftops, leaping over or sliding under obstacles, wall-running over precipitous drops and making it all look easy. Sparkour is a multiplayer first person parkour racing game that captures the feel of those runs. It may look rather simple but it feels great.



Double Kick Heroes

DEVELOPER HEADBANG CLUB
PUBLISHER HEADBANG CLUB
DUE SOON
doublekickheroes.rocks

▶ The inevitable zombie apocalypse has happened. What is a band to do but take a cross country road trip in their sweet Gundillac and use the awesome power of METAL to smite the walking dead? A survival shooter rhythm game, Double Kick Heroes sees players mashing away on virtual kick pedals to keep in time with 30 or so tracks, firing the rear-mounted guns as they do. The demo is hugely fun, so we assume that the final product will be more of a good thing.

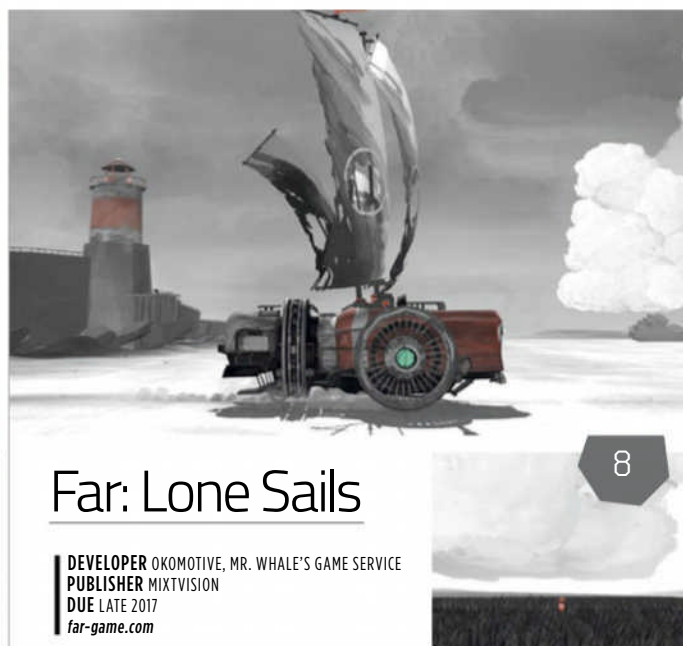


The Hex

DEVELOPER DANIEL MULLINS GAMES
PUBLISHER DANIEL MULLINS GAMES
DUE 2017
the-hex.com



▲ From the mind that brought us the wonderfully metafictional point and click adventure/thriller Pony Island comes another strange, meta, fourth wall breaking adventure in the form of The Hex. Six videogame protagonists – the Spacemarine, Sorceress, Platformer, Fighter, Apocalypse Survivor and First Person Perspective – drink at a tavern. A storm rages outside. The barkeep receives a call. It's hard to make out the details but the gist is simple. Someone in the tavern is planning a murder.



Far: Lone Sails

DEVELOPER OKOMOTIVE, MR. WHALE'S GAME SERVICE
PUBLISHER MIXTVISION
DUE LATE 2017
far-game.com

▲ Explore a vasty, dried out seabed and uncover the remains of a long forgotten civilisation in this vehicular exploration/survival game. Keep your strange, cobbled together vehicle running and scavenge what you can to upgrade components so you can make it further into the lonely wasteland. There are no zombies in this post-apocalypse, just the empty expanse of the ocean bed and the mystery of the dead civilisation.



My friend Pedro: Blood, Bullets, Bananas

DEVELOPER DEADTOAST ENTERTAINMENT
PUBLISHER DEVOLVER DIGITAL
DUE SOON
deadtoast.com

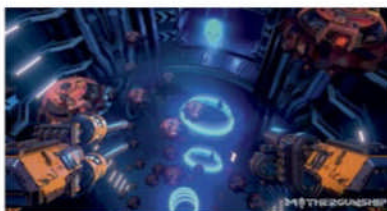
▲ When your best friend Pedro asks if you are ready for an adventure, you can do little but say yes, grab your guns and get ready. The fact that Pedro is an invisible flying banana means nothing. The men you're about to shoot in the face certainly deserve it. Flip tables, jump through windows, acrobatically flip through the air whilst targeting different enemies with each hand. This is what you get if you cross The Matrix, Taxi Driver and a talking banana.

9



Mothergunship

DEVELOPER TERRIBLE POSTURE GAMES, GRIP DIGITAL
PUBLISHER GRIP DIGITAL
DUE TBA
mothergunship.com



▲ A first-person bullet-hell hybrid with detailed crafting mechanics, Mothergunship is the kind of insanity we can definitely get behind. Data-hoarding alien robots have invaded the Earth, and it's up to you to stop them. Fight waves of enemies, huge bosses and deadly traps with a range of guns that is limited more by capacity than anything else. Gun parts are modular, so it's up to you to put them together. Want a 12-barrel mini-gun that fires explosive rounds? Make it happen.

10



A LIGHT THAT NEVER GOES OUT

It's time to give Destiny a second chance to make a first impression, writes **ANDREW WHITEHEAD**

DESTINY 2

DEVELOPER BUNGIE
PUBLISHER ACTIVISION
DUE TBA (PC)
greybox.com/rime/en/

Broadcasting live across the internet from a private airport hangar in south Los Angeles, the world finally got its first glimpse of Destiny 2. Bungie used their time to send a clear message to everyone watching around the world - they've listened to their community. It was a not-so-hidden way of addressing the reception of the first Destiny, which many critics and players agreed failed to meet expectations.

Over the years expansions and updates improved Destiny considerably, with final expansion, The Taken King, being a welcomed soft reboot of sorts. Destiny may have stumbled out of the gates, but finished strong. Still, at its core were a number of design issues that couldn't be simply swept under the rug, which is why the series needed a fresh start. Sometimes you do get a second chance to make a first impression.

LET'S TRY THIS AGAIN

This desire to get players onboard quickly with Destiny 2 is apparent from the opening moments of the first campaign mission entitled Homecoming. The Tower, a gathering

spot for Guardians and an iconic structure looking over the Last Safe City on Earth, is under attack from a new threat known as the Red Legion. Led by the self-righteous commander Lord Ghoul, the Red Legion are fueled by the belief that the Traveler, the city-sized spherical being that hovers over Earth, chose the wrong creatures to receive its Light.

"We're going to introduce to to a villain that you're going to love to hate," said Steve Cotton, Bungie's World Lead. "He's more complicated than you think he's going to be, he's motivated, but he's also conflicted. He really wants to take the Light, but he also wants to be chosen by it."

Within minutes of their arrival, the Red Legion lay waste to humanity's final hiding place and start to take the Traveler away by force. It's quite a sight for returning players to see both the Tower and the Traveler being ripped away so violently.

The high stakes action serves as an introduction to the Guardians for new





The Red Legion clearly weren't fans of Peter Dinklage's voice acting.

players. Within the Destiny universe, the Traveler came to Earth and shared its knowledge with us, bringing with it a new Golden Age of technological advancement. It also reanimated fallen warriors as Guardians, bestowing upon them superhuman abilities and access to incredibly advanced technology to defend Earth.

At a ground level, the battle for the Traveler looks brilliant with Red Legion ships filling the stormy skies above and dropping hordes of enemy soldiers into your path. The constant need to press forward gives the fight a sense of urgency that the opening of the original Destiny sorely lacked. In the first game, you were awakened and told you were the hero Earth needed; in Destiny 2 you're thrown into a battle and shown that nothing you do matters. Humanity has already lost.

Bungie are determined to give the story a more personal feel this time around, which is a direct response to the lore-heavy but character-light storyline of the first game. Though my time with the campaign was limited, I can attest to much I enjoyed fighting the Red Legion as they ripped through the Tower, and how keen I am to see where it leads.

THE VAULT IN OUR STARS

This mass destruction of The Last Safe City on Earth and the Tower serves two purposes, the first is it acts as a reset button to place returning and new players on a level playing field. See, in the midst of all the chaos, those damn aliens destroyed the vaults holding everyone's gear. Every. Single. Vault. Including yours (if you had one).

It's not Bungie's fault your precious gear won't be here in Destiny 2, it was the Red Legion. Though some hardcore fans of the first game hoping to transfer

their gear may be annoyed at this loot reset, it's a smart move that will ensure new Guardians don't feel left behind on day one.

The other reason for the chaotic opening is to spread the Guardians across the galaxy, which of course means somebody is going to have to go and round them all up to take on the Red Legion. You know what that means, right? You're going to take on a bunch of quests. A whole lot of them.

In an effort to streamline how quests work in Destiny 2, you no longer have to return to home base to complete or take on new ones. This is a much-needed change from the first game's stop-start way of handling quests that required way too much backtracking and returning to places you literally just left.

Players can also find sidequests, or Adventures as they're called in the game, strewn about the map. In an effort to move away from levels that feel like they're populated solely by bad guys and other players looking for loot, maps are now far more fleshed out.

Small outposts around the map are also filled with their own stories that help flesh out the world while also offering unique activities for players to try out. Want to take a break from shooting? Play a friendly game of soccer with a giant ball. For all its seriousness on the surface, Destiny has never been above having a sense of humour at its core.

I'VE SEEN THINGS YOU WOULDN'T BELIEVE

Sitting alongside Adventures are hidden areas called Lost Sectors, which act as mini-dungeons complete with unique bosses and treasure to uncover.

■ Bungie are determined to give the story a more personal feel this time around ■



The annual meeting of the National Pulse Rifle Association was off to a tense start.

THE PS4 PRO-MISE

From my hands on time with Destiny 2 on PC I can confirm the whole experience was smooth as butter. Even during intense moments in battle, the game never appeared to go below 60 frames per second. In comparison though, the PlayStation 4 Pro, which is currently the most powerful console on the market, was locked in at 30 frames per second. Both versions look fantastic, but jumping between the two made the difference very noticeable.

Both Adventures and Lost Sectors are indicative of how much Bungie want players to feel free to explore their worlds and encourage them to spend hours exploring without feeling forced to go back to a centralised hub.

Players can also encounter dynamic Public Events during their travels, which they can join with other players, or bypass completely. Steve Cotton told me of an encounter he had with a Public Event that spiraled out of control while he himself was off doing an Adventure.

"I was [on a] Adventure mission that had me constructing these platforms out of nowhere," explained Cotton. "There's guys below doing their own thing, and they can see me building these platforms. And I see them doing the same Public Event I've done maybe five or six times already, but I see a Cabal Mosquito fly down and start laying waste to them - and

I'm like 'I don't remember seeing this when I was doing that'."

Wanting to lend a hand to his fellow Guardians, Cotton began raining down rockets on the alien attacker and eventually helped destroy it. "But because I destroyed it it set off a Heroic Encounter for that Public Event, so now the whole thing changes. Now those people down there, who think they know what they're doing, are suddenly fighting Cabal Commanders and new ships are coming in. And I'm up there thinking 'yeah I did that, you don't even know' [Laughs]. So then I jump in and help them finish it."

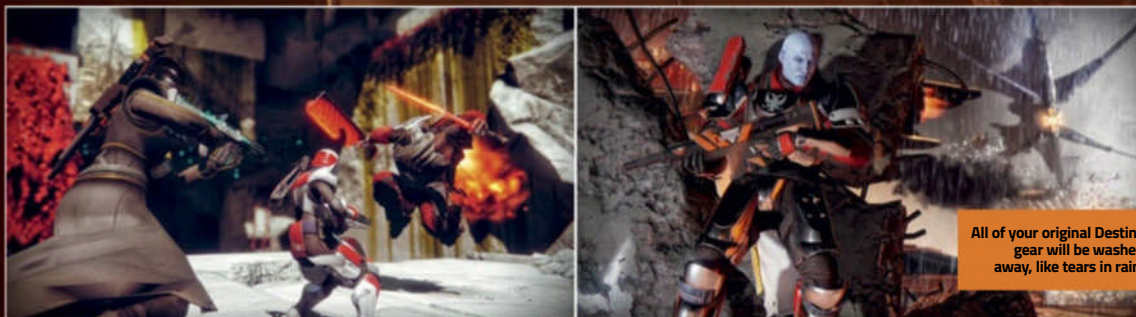
Emergent events like this in Destiny 2 promise to offer engaging distractions for players and encourage them explore the environment with greater care than before. Even Cotton said that during his playtests he'd often find himself staying on one

planet all night, not once feeling the need to head back into orbit and try somewhere else.

WHOLE NEW WORLDS

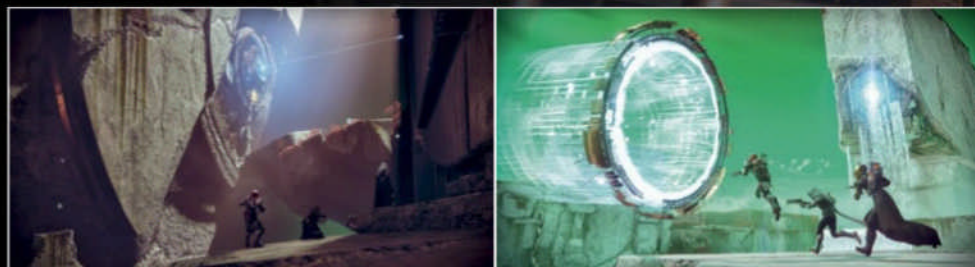
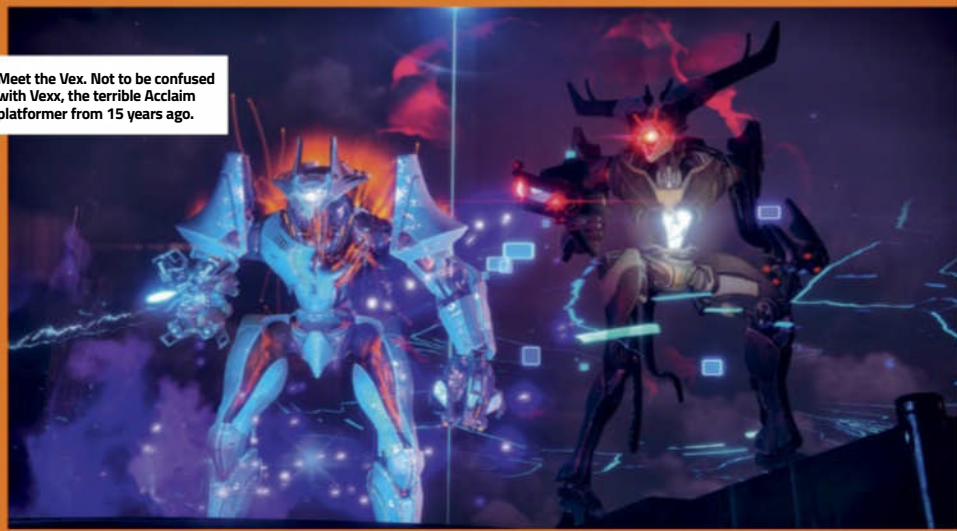
Building off the mythology of the first game, Destiny 2 features an array of new planets and regions for players to explore, all of which have been touched by the arrival of the Red Legion in some form. The planet Titan, one of Saturn's many moons, is one all encompassing methane ocean that's also home to a number of arcologies built by humans. After the Red Legion invasion, Titan became a makeshift base of operations for Commander Zavala, the Titan Vanguard.

Io, the moon of Jupiter, is now a habitable planet after being touched by the Traveler on its way to Earth. Covered in huge trees and lush foliage, the forest planet is also where Ikora Rey, the Warlock Vanguard, has



All of your original Destiny gear will be washed away, like tears in rain.

Meet the Vex. Not to be confused with Vexx, the terrible Acclaim platformer from 15 years ago.



retreated to in search of answers to what happened back on Earth.

On the more alien-ish end of the spectrum is Nessus, a planet almost fully consumed by the Vex - a race of ancient cyborgs that are hostile towards Guardians. The Hunter Vanguard Cayde-6 (expertly voiced by Nathan Fillion) hangs out here, spending his days exploring the natural wonders of the planet as they slowly succumb to the Vex's growing cybernetic landscape.

Finally, there's the European Dead Zone, otherwise called the EDZ. A devastated region here on Earth that was originally ravaged by the Fallen, an insectoid alien race that appeared in the first Destiny game. Now swarming with Red Legion troops, the EDZ is also home to a shard of the Traveler and as such has become a base of operations for surviving Guardians.

DON'T TRAVEL ALONE

While you can play Destiny 2 as a single-player game, it's an always-online experience that encourages you to find people to play with to enjoy the game to its maximum potential. One of the bigger issues being addressed in Destiny 2 is how much cooperative

Running in 4K at 60 fps, the PC version will likely be the definitive version of the game

content was locked away from solo gamers in the first game.

The logic back then was players who knew each other were more likely to complete long raids together and not bail halfway through. But the reality was a lot of Destiny players missed out on big end-game missions simply because they didn't have anyone to play with.

Bungie is tackling this issue in two ways - the first way is by supporting clans in-game. Players can now create and manage clans, complete with custom banners, invitations for new members, and rewards that will be shared among all members regardless of time played.

The second way Bungie are building their Destiny community is through Guided Games, which allows solo players to sort through clans, find one

that suits them, and temporarily team up with them to go on raids and share in the loot. In an effort to keep the online toxicity to a minimum, there'll be tools in place to ensure hardcore and casual players can easily identify who they should be playing with.

The Crucible, Destiny's player-versus-player mode, is also making a comeback in a new four-versus-four format across all modes. Updated HUD elements will clue you in on which players have their supers ready (sort of like Ultimates in Overwatch) and who has found power ammo for their strongest weapons. There's also a new game mode called Countdown which sees two teams alternating between planting bombs at set locations to win the round, or defending those locations by eliminating the opposing team.

My first game of Countdown was a disaster. I was on a team that played as individuals and we lost to a well organised group of what I can only assume were Destiny veterans. Game two went a lot better - my new group knew how to attack when we had the bomb, and how defend when we didn't. We saved up our supers, didn't leave bomb planting spots unguarded, revived fallen allies - it was tense down to the wire game, but we won in the end.

There's a lot of little changes to the Crucible that returning players will appreciate that are too specific to go into here. But I will say that as someone who never thought the player-versus-player content in Destiny was much fun, what I experienced in Destiny 2 felt like a big improvement.

Understandably though, for a lot of players the big drawcard of Destiny 2 will be the cooperative player-versus-environment content. On offer at the reveal event was a three-player Strike mission called The Inverted Spire, which saw myself and two other players trekking across the cybernetic planet of Nessus to fight a giant



GOTTA KEEP 'EM DEDICATED

The always-online nature of Destiny 2 lends itself to a dedicated server setup - or so you'd think. Bungie have confirmed that the PC version will not have dedicated servers, similar to the console versions of the first game, but have assured fans this is something they'll keep an eye on and address if issues arise.

mechanical beast hidden inside ancient underground ruins.

Designed to be a tightly focused experience you can complete with a couple of friends, this one mission took around twenty-five minutes to finish and was the highlight of my time with Destiny 2.

PREVENTING PC PORT PITFALLS

When the first Destiny was released, making both current and previous generation console versions of a game was still the norm. But with the Xbox 360 and PlayStation 3 out to pasture, Bungie have turned their focus to the PlayStation 4, PlayStation 4 Pro, Xbox One, and for the first time, the PC.

David Shaw, head of the Bungie's PC development team, said their primary goal is to have people talk about the game and not about missing features. "One of the things we put a lot of effort into is making sure we came out of the gate as a legit PC game," explained Shaw. "At launch we're focusing on the things we think are most valuable [to PC players] that really give it that PC feel."

True to their word, out of the box Destiny 2 supports a variety of resolutions, including 4K, as well as 21:9 monitors, text chat, adjustable field of view, and an uncapped framerate. "We'll have a bunch of different knobs and dials on things like texture detail and foliage detail," explained Shaw. "We'll have all these different things that'll allow players to go for the best possible [look], or turn things down and say 'all I care about is those ten pixels that are that guy's head.'"

Though no firm plans have been announced, Bungie have said its very

likely Destiny 2 on the PC will miss the September 8 launch date locked in for the console versions. Release issues aside, I can assure you that the PC version is incredibly impressive. Running in 4K at a smooth 60 frames per second, the PC version will likely be the definitive version of the game.

ENOUGH SPACE FOR EVERYONE

When Game Director Luke Smith took to the stage in that steamy airport hangar to show off Destiny 2 to the public, he told the crowd that Bungie wanted this sequel to "represent a chance to welcome new players into our world." And after spending some time with the game, I have to say they've rolled out quite the welcome mat.

I was never a huge Destiny player, having played the first game for only a short while and never touching the expansions. It was a good game for sure, a very good game, but not a great one. But the hard lessons learned from Destiny's rocky lifecycle now serve as a solid foundation for its follow-up.

Destiny 2 is the fresh start the series deserves, so ignore that that big 2 at the end of the title because this isn't a sequel in the traditional sense. It's a new beginning. A chance for players new and old to get in on the ground level and experience Bungie's vision as it should be - engaging, challenging, uncompromising, and above all, fun. **PC**



THE PLATFORM FORMERLY KNOWN AS

A surprise announcement during the reveal event was that Destiny 2 on PC will be released on Blizzard's distribution platform, Battle.net. Don't be confused by the name though - Blizzard are sticking with their 2016 rebranding of Battle.net to Blizzard Launcher, but they decided to use the old name at the Destiny 2 reveal. It's probably because people have called it Battle.net for over 20 years, and as it turns out rebranding is kind of hard to do.

THE HEADLESS, HORSELESS MAN

Samus it ever was

DEAD CELLS

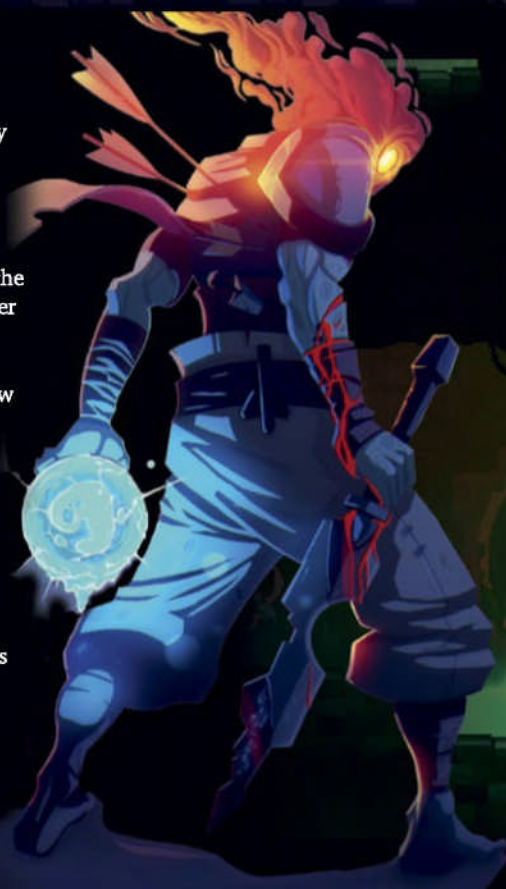
DEVELOPER MOTION TWIN
PUBLISHER MOTION TWIN
DUE EARLY ACCESS
dead-cells.com

Steam, and indie development as a whole seems to run in cycles, with the style of games under development switching every six or so months. About two years ago everything being released seemed to be some kind of Rogue-like or Rogue-lite with permadeath, then the mood seemed to switch to everything appearing to be a survival sandbox of one kind or other. At the moment, the major thrust of development seems to be Metroidvania style games. The fact that development in the indie space follows certain themes isn't that surprising – the same happens with AAA development. What is surprising, especially in the case of the two Metroidvania style games we're looking at this month, is how exceptionally good they are.

Dead Cells developer, Motion Twin has been around since 2001 making mobile and browser games. The company works as a collective, with no formal hierarchy or boss, and everyone receives the same pay. It may be a somewhat odd corporate structure but Motion Twin is obviously doing something right – even in early access, Dead Cells, the first PC game from Motion Twin, has all the hallmarks of being a masterpiece.

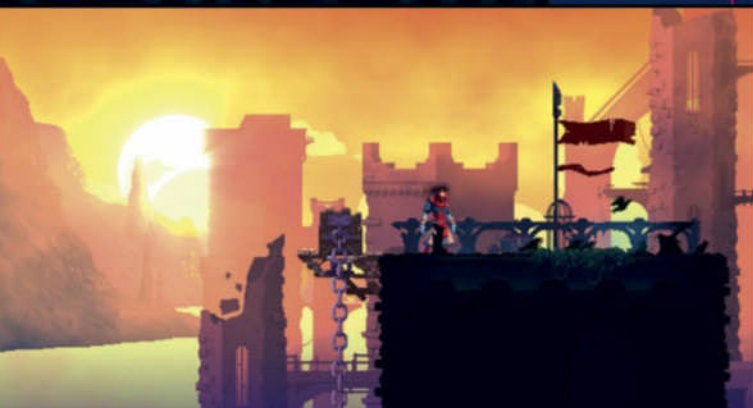
The story may not be in the early access code, or may be absent from the game entirely, but it doesn't really matter. You play a headless man in a nightmare world trying to harvest dead cells to stop his body from decaying. That's all there is to it and that's all that's needed to spur you into action, fighting across numerous stages, exploring the depths and breadth of the world to find better equipment, blueprints for gear and special abilities to make it further to harvest more cells to spend on upgrading or unlocking new equipment that is added to the drop list.

Levels are procedurally generated but follow a unifying design. Progress can be made by moving from left to right – the end of the level will always be to the right, but that skips a lot of content. Most of the harder, more interesting areas can be found by going down when possible. If you're a fan of speed-running games, there is also incentive in the form of doors that can only be opened if you reach them under a certain time threshold. Traps, spikes and ever-present enemies of various types ranging from simple lumbering melee mobs through to grenadiers, archers and





Exclamation marks are bad. For journalists and enemies alike.



the end of the level will always be to the right, but that skips a lot of content



To judge by the Steam charts, it looks like Dead Cells, too.

forcefield casters stand in your way.

Don't even think of trying to play Dead Cells without a controller, as the combat and movement are almost entirely unsuited to keyboard and mouse. Two face buttons on the controller trigger the left and right equipped weapons, like a whip and a shield, and the triggers control two secondary weapons like grenades or deployable turrets. These secondary weapons have a cooldown imposed so they can't be spammed. Each weapon, or which there are many, change the way combat plays out. The whip, for instance, is fast but fairly weak unless you hit enemies with the very tip. Do that and the whip deals critical damage. A sword offers faster slashing but you need to be closer to the enemy for it to hit. A shield can block and attacks or deflect a missile but slows you down. On top of these basic weapons, various magic weapons also change up how the game plays. An electric whip that throws a grenade on the first strike, or a grenade that covers enemies in oil making them more vulnerable to fire being but two.

Death is permanent in Dead Cells. You lose all of your accumulated gear and cells and start back at the beginning, but progress is permanent. Any gear or special ability you have unlocked in previous runs remains, allowing players to entirely skip some areas by taking shortcuts triggered by abilities learned later in the game. Of course, skipping all that content can leave you underpowered when you reach the stage in which you died before, but fighting through all those stages could be just as hazardous to your health. What should you do? **DANIEL WILKS** **PC**

THE SAMUS OVER INNSMOUTH

And Aran, Aran so far away

SUNDERED

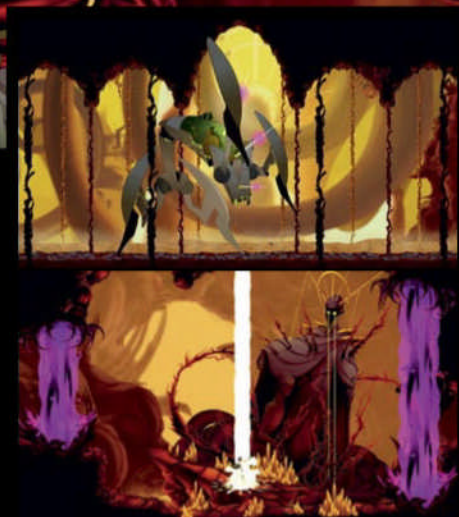
DEVELOPER THUNDER LOTUS GAMES
PUBLISHER THUNDER LOTUS GAMES
DUE JULY
thunderlotusgames.com

We took a look at the beautiful, hand-drawn Metroidvania by way of H.P. Lovecraft a few issues ago, but thanks to the power of being a Kickstarter backer (full disclosure – I definitely backed Sundered on Kickstarter) we have some more up to date code to play, and boy howdy is it good.

As with Dead Cells, Sundered does something that seems both incompatible with the meticulous crafting that goes into a Metroidvania type game as well as one that utilised hand drawn animations and backgrounds – the levels are largely procedurally generated - but Thunder Lotus Games has a clever workaround. While the majority of each area may be procedurally generated, there are set rooms and encounters that appear in the same general location each time, giving the randomly generated game structure and allowing it to keep that sense of progression when it comes to gaining skills and gear. That said, there isn't quite the same sense of exploration as you would find in a traditional Metroidvania style game thanks both to the uncertainty of layout and the fact that some enemies respawn.

It's not necessarily a bad thing. From our experience so far, Sundered is definitely its own beast when it comes to the actual experience. It's very much a game of trial and error. Enemies are numerous and while the combat is seemingly simple – one face button on a controller slashes away – the protagonist, Eshe, is definitely light on their feet and can jump after performing an aerial attack, combat can quickly become a rather dazzling, vertical affair. As nimble as Eshe may be, enemies are numerous and care little about platforms when it comes to pathing. They drop shards when they die, a currency that Eshe can spend on upgrades, but only after a death.

Die and you're respawned at a central hub where you can spend any accumulated shards. The procedurally generated paths between the preset areas are generated anew, the enemies respawn and you head off again, all in the hopes of getting to that area's boss and gaining more progress. The bosses themselves are huge, impressive and require players to remember and react to attack patterns. Defeating a boss allows Eshe to enhance a skill by "corrupting" it, and while this definitely makes the skill more powerful,

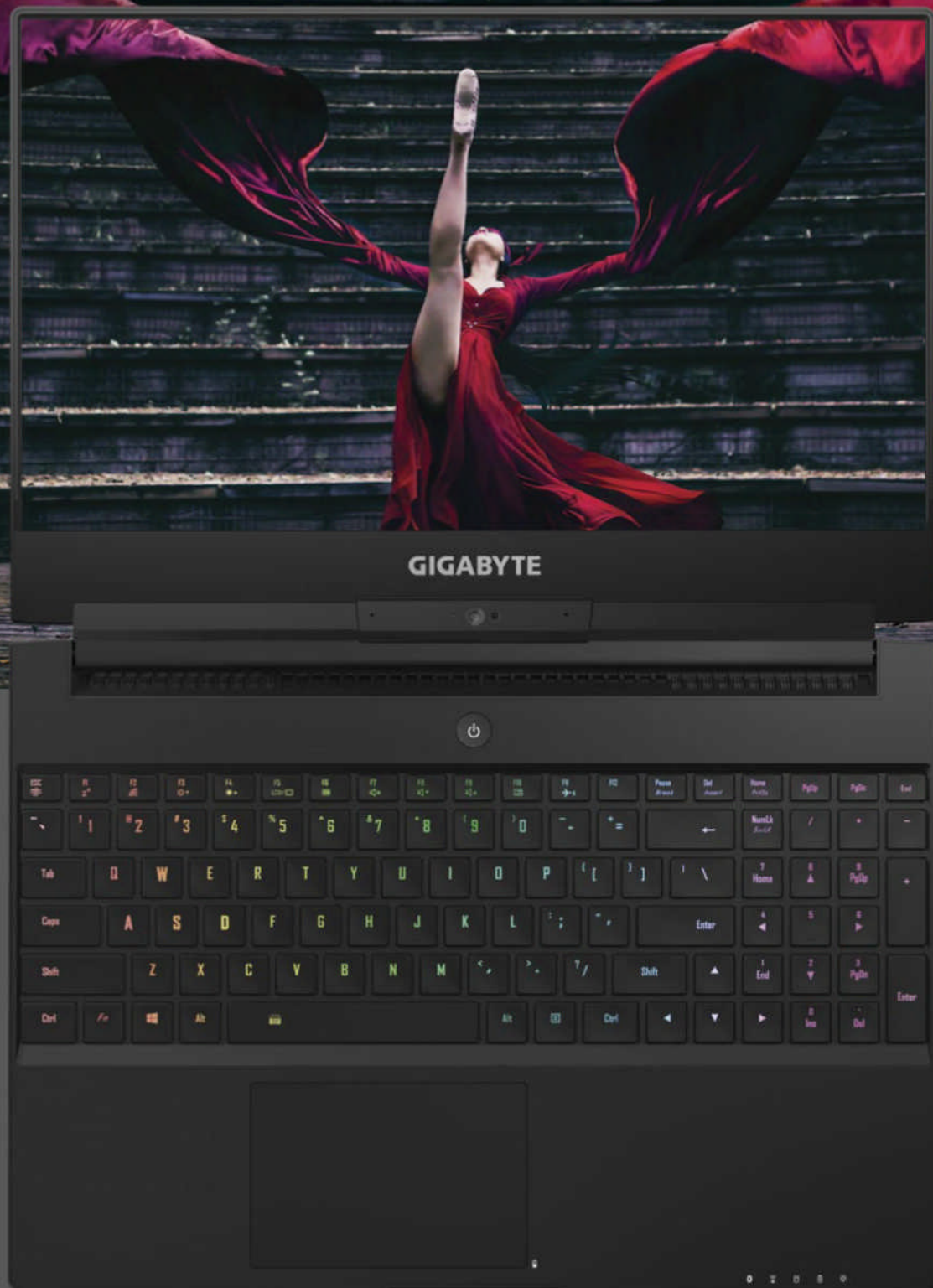


it also effects later content in the game and, from what we understand, increases the complexity of the final boss. Do you trade off an easy trip to the final boss for a much harder battle, do you risk a harder trip to make the final battle less worrying or do you try to balance power and difficulty?

Sundered is looking quite polished, in a rather grim way in its beta form. There are still a few months before the final game is released. We can't wait to get our hands on the finished version. We're looking forward to be able to corrupt every skill, buy every upgrade and face the baddest end boss possible.

TAVISH FORREST **PC**

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THE OPIATE OF THE MASSES

Only the Penitent Man shall pass...

BLASPHEMOUS

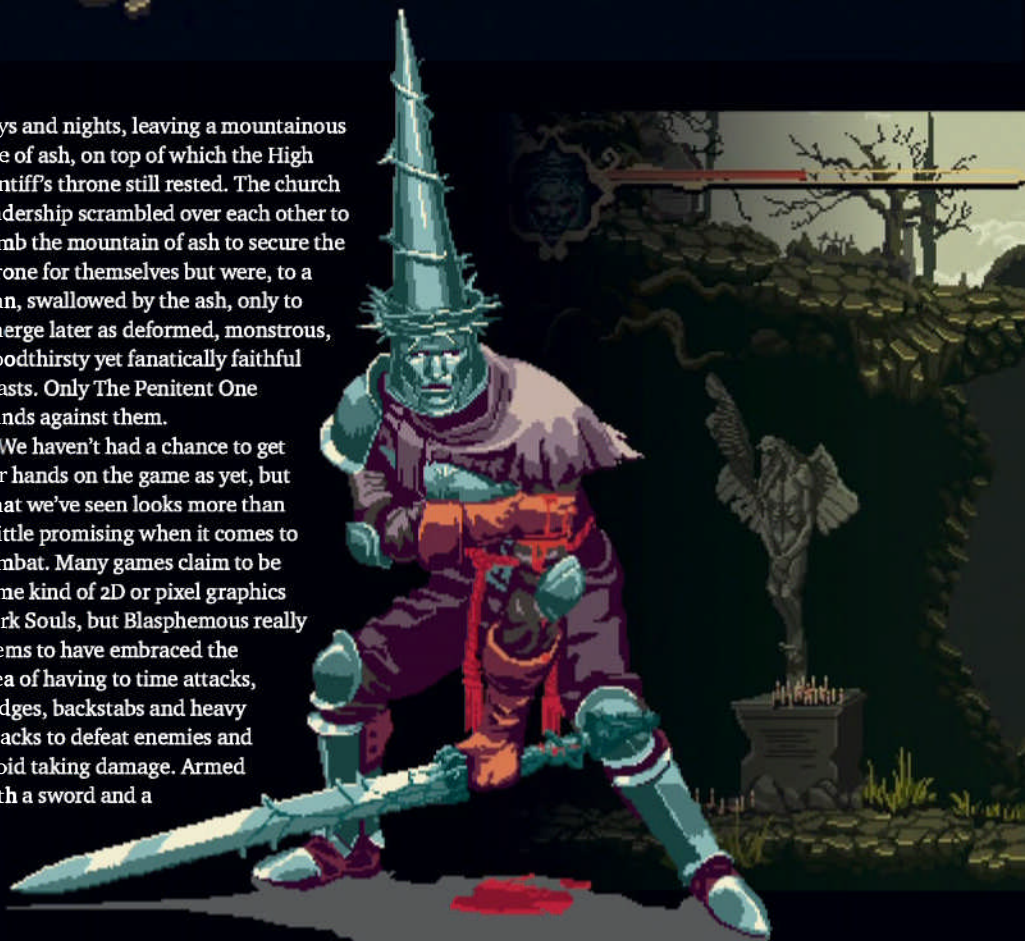
DEVELOPER THE GAME KITCHEN
PUBLISHER THE GAME KITCHEN
DUE TBA
blasphemousgame.com

In many respects Blasphemous may look much like Dead Cells and Sundered, but despite being a 2D action platformer, that really couldn't be further from the truth. Blasphemous isn't a Metroidvania style game. Sure, the levels are non-linear and progression isn't necessarily made by going left to right, but exploration is a secondary concern. Blasphemous is a game about deep, satisfying combat against a range of creepily religious monsters and massive, even creepier bosses.

Currently finishing up a crowdfunding campaign on Kickstarter (the campaign blew through its goal within a few days of launch), Blasphemous puts players in the iron shoes of The Penitent One, the last survivor of a congregation cast into the Abyss of the Eternal Grief. The world in which the game is set, Orthodoxia, is, or at least was, a pious one. Churches outnumbered people and the clergy formed the backbone of every walk of life. All appeared well until the High Pontiff, frustrated at the lack of devotion turned his golden throne around and put his back to the people. After months of silence, the High Pontiff transformed into a huge, gnarled and barren tree that burned for 90

days and nights, leaving a mountainous pile of ash, on top of which the High Pontiff's throne still rested. The church leadership scrambled over each other to climb the mountain of ash to secure the throne for themselves but were, to a man, swallowed by the ash, only to emerge later as deformed, monstrous, bloodthirsty yet fanatically faithful beasts. Only The Penitent One stands against them.

We haven't had a chance to get our hands on the game as yet, but what we've seen looks more than a little promising when it comes to combat. Many games claim to be some kind of 2D or pixel graphics Dark Souls, but Blasphemous really seems to have embraced the idea of having to time attacks, dodges, backstabs and heavy attacks to defeat enemies and avoid taking damage. Armed with a sword and a





You may remember this scene from Dark Souls, Dark Souls 2 and Dark Souls 3.



All the kids picked on him in the playground for wearing such a silly hat.

deep, satisfying combat against a range of creepily religious monsters



martyr's will, The Penitent One can equip different sets of Rosary beads, don a crown of thorns or carry different religious relics that change the way combat handles enabling players to mould the character to their liking.

The pixel design looks both gorgeous and grotesque with inspiration drawn from both the artwork of Francisco Goya and the city of Seville in Spain, with the design for The Penitent One being drawn from the former and the

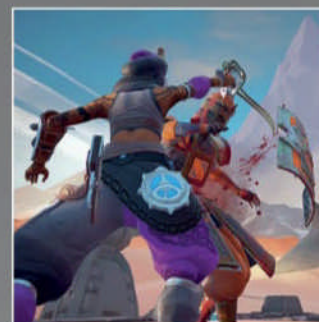
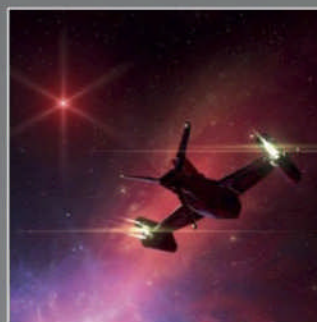
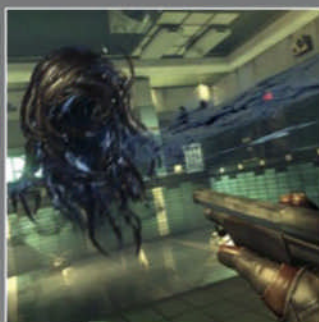
locations echoing the latter. Monster design is certainly more than a little blasphemous, with distorted visions of regular acolytes through to angels, with bosses including what appears to be a giant, blind baby with a halo of thorns. Those with deep religious sensibilities may want to steer clear, but if you're looking for a dark, frantic side scrolling action game, Blasphemous looks like it has the definite potential to become a must have worthy of fanatical devotion.

DANIEL WILKS PC



Games

YOUR GUIDE TO PC GAMES



Stayin' alive

Why every game have to be life or death?

I often sit down to this intro and think "Yeah, let's see if I can find a theme in this month's games!" Sometimes it's easy, and so I can riff on something that unifies everything we're reviewing.

Other times... Yeah, it's a little eclectic this month. I guess you could say survival is the very lowest common denominator. Both *Prey* and *Impact Winter* are survival challenges about limited resources, though they approach the issue from two very different directions. *The Surge* is about surviving harsh combat... Yeah, I guess it's almost too easy. But I guess it's interesting to look at all these different games and realise that all too often gaming experiences are built around negative challenges – to kill or be killed, basically.

Oh well – at least we have some remarkably cheery versions of that this month – I've not played *Strafe* yet but boy does it look like a joyous celebration of gibbing!

David Hollingworth
Digital Editor

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SCORING SYSTEM | PCPP scores its games on a 1 to 10 scale. The higher, the better – though 10 is by no means a "perfect" game. We're not convinced such a thing exists, so consider a 10 a masterpiece of PC gaming, despite its inevitable flaws. A 5 is a decidedly average game; one that doesn't excel in any particular area, without being an affront to our senses – the ultimate in mediocrity. Below this, you'll start to find the games our reviewers suffered an aneurysm getting through; above it, the titles truly worth your time and money. And remember: a score is only a vague indication of quality. Always read the full review for the definitive opinion!

WE
PLAY
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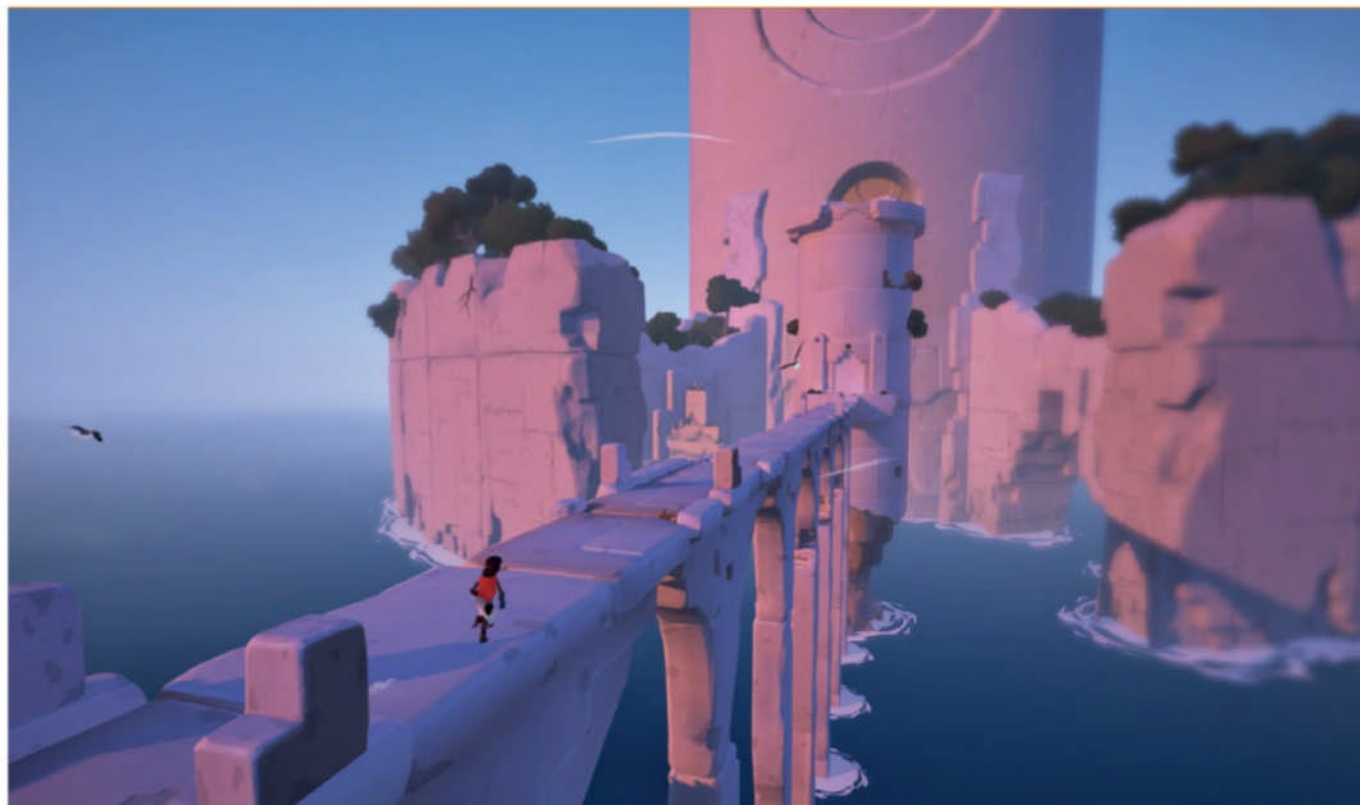


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RIME

The albatross lives

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I'm not usually one to be drawn in by whimsy. For the most part the whimsical is more prone to frustrate or annoy me rather than tug at my heartstrings or fill me with childlike glee. It's not because I'm a grumpy old curmudgeon, no matter how much I like to play up that image but rather the simple fact that whimsy often seems to be a replacement of any real emotional or depth, essentially tricking people into forgiving some otherwise painful flaws. Rime is whimsical as hell, but it's not shallow. It's a gorgeous, rich and melancholy adventure that brims with magic, both literal and figurative and manages to tell a story of mystery and survival without a single word being spoken, from the moment the boy wakes up on the beach to the final revelation as to his fate.

A boy named Enu awakens on the shore of a mysterious island. He is seemingly the sole survivor of a shipwreck. Unruly black hair and a red cape give Enu an easily identifiable silhouette, and this level of simple but clever visual input runs throughout the game. There

are no words spoken, but thanks to clever shading, lighting and other subtle visual clues, each area Enu explores and every puzzle he solves communicates everything you need to know. A light facing edge on any ledge, brick, branch or building demotes something that can be climbed. Giant beams of light blast up into the sky from the area containing the next puzzle. Brightly coloured objects are often interactive in some way. Anything you need to know to solve a puzzle is spelled out in these visual clues.

There is a general lack of handholding when it comes to Rime, beside a ghostly fox that guides Enu for some early portions of the game and a mysterious figure robed in red that appears at some points of interest. It's left up to the player to not only figure out how to solve the puzzles but also find secret tokens or conch shells that expand on the boy's history, the island and the overarching story. The subtle signposting of climbable areas or the general direction of the next puzzle mean that you never really have to be worried about

leaving the main path, as you will always be able to find your way to your destination if you pay attention.

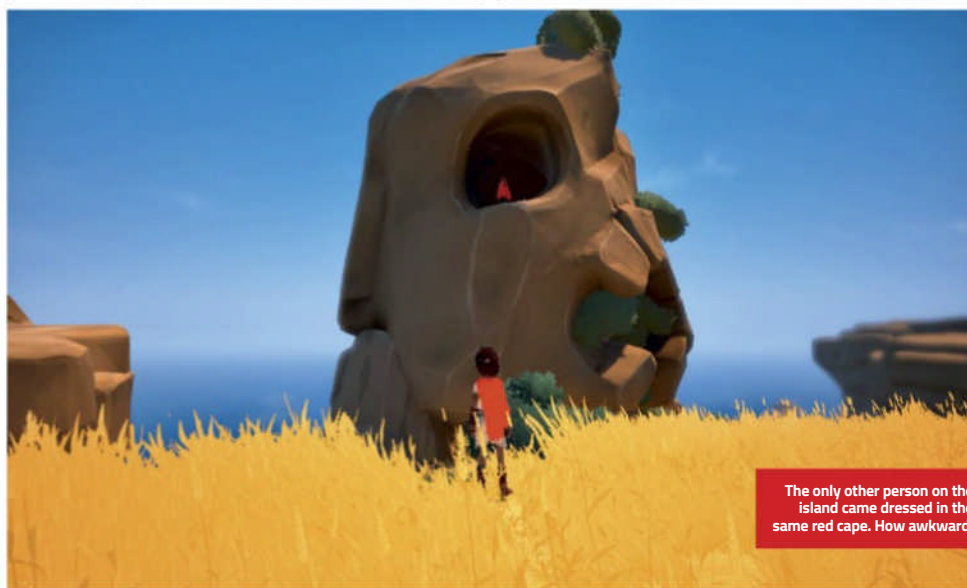
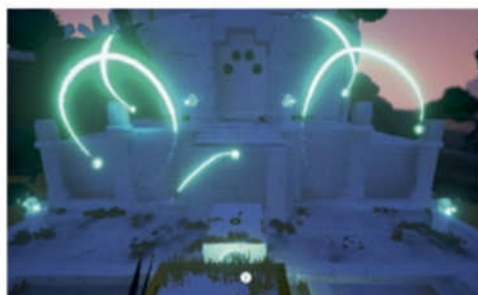
Although Rime initially had a far more survival oriented bent with a stamina bar and enemies that needed to be avoided or dodged, but Tequila Works rather wisely decided against the more action oriented style somewhere along the way. While the boy can still roll - possibly as a leftover from the earlier stages of development, or maybe just to offer an alternative to running - the pace of the game is languid for the most part, with the player free to explore and solve puzzles at their own pace, the exception being a couple of encounters with giant beasts that act more as a time constraint or neat shock than a real threat.

The world is broken into five distinct, themed areas. The first is a lush coastal land with trees, swaying grass, wild pigs and the sun bleached ruins of an ancient civilisation. This leads to a desert for the second act, a forgotten city in the third and a rain-soaked

ruin in the fourth. The final act should remain a mystery. While the environments vary greatly throughout the game, the architecture doesn't, giving a real sense of cohesion through the levels even when the actual environments don't organically sync. Each act also increases the complexity of the puzzling, adding extra mechanics into the mix, such as moving boxes, pressure plates and some neat tricks with perspective shifting. No matter how mechanically complex the puzzles become, they are rarely a challenge to solve, but the actual challenge of the individual puzzles seems to be beside the point. The pleasure of Rime is more about working out what the puzzle is in the first place.

Enu only has access to a few moves himself. He can run, jump, interact with objects and use his voice, and each puzzle is solvable with this simple move set. Observing the environment and paying attention to the small details are key to progression. The very first puzzle, for instance, features a fox sculpture surrounded by smaller sculptures in a glade. Wild pigs roam the area, gorging themselves on the pumpkin-like fruit that fall from bushes. None of the puzzle is particularly obvious. There is a door at the end of a broken bridge near the largest fox statue. How do you get there using only your ability to run, shout and interact with objects? After a little experimentation, the solution becomes fairly obvious. I found real satisfaction in that, but if you're after a genuinely challenging puzzle game, your mileage may vary.

In some areas solving puzzles opens the path to the next puzzle but other areas are more open and allow players to solve the puzzles in whatever order they choose. Between levels the story is fleshed out with cutscenes in which Enu discovers more about the world and his past and meets some characters willing and able to help him in his journey. For a game without language, there is quite a bit of information and emotion delivered

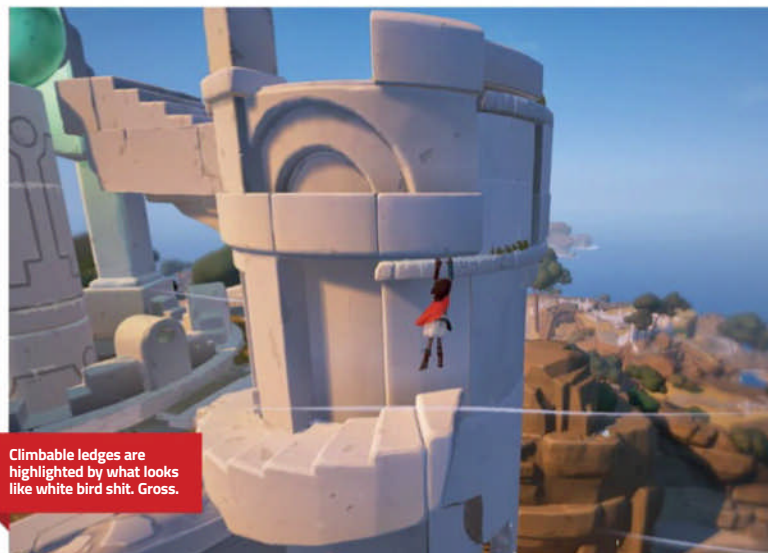


The only other person on the island came dressed in the same red cape. How awkward.

Observing the environment and paying attention to the small details are key to progression

WHY SHOULD I CARE?

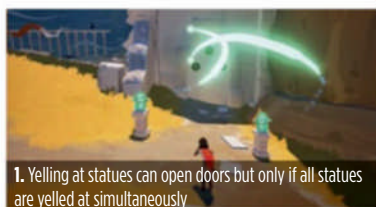
- + You like shouting at inanimate objects
- + You solve problems with thrown fruit
- + You fear giant birds



Climbable ledges are highlighted by what looks like white bird shit. Gross.

SEQUENCE

YELLING AT DOORS



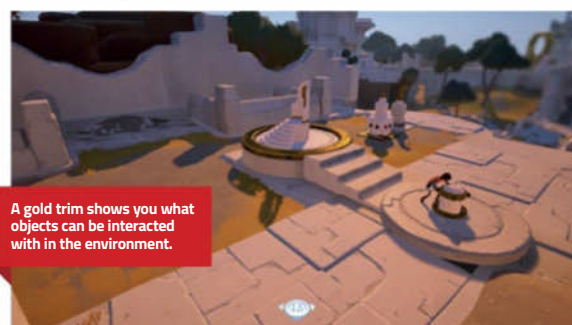
1. Yelling at statues can open doors but only if all statues are yelled at simultaneously



2. This one is just out of range but if you position yourself just right you can yell again to activate it



3. Who says throwing a tantrum won't get you anywhere?



A gold trim shows you what objects can be interacted with in the environment.

YELLING AT TREES

1. Orbs on movable pedestals work as amplifiers enabling Enu's voice to travel farther

2. This statue will reconstitute a nearby bridge

3. This tree and pool was initially a pit. Using the giant amplifiers Enu activated all the associated statues simultaneously transforming it, giving him access to a key

4. A massive amplifier in range of the tree and just in range of...

5. this amplifier that is just in range of...

6. the giant amplifier at the top of the tower

through these cutscenes, thanks in part to the excellent animation, especially in the case of Enu. As beautiful as the game is, the simplistic but evocative environments pale in comparison to the absolutely gorgeous soundtrack. The string heavy soundtrack fits perfectly with the world and themes of the game, evoking a sense of wonder with the discovery of new areas and puzzles, but maintaining a sombre, sometimes sad feeling throughout.

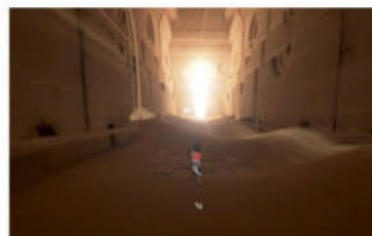
For the most part, Rime handles very well, with smooth framerates and right controls. The only time there is a slight hiccup is when Enu is hanging from a ledge and has to make a jump. Rather than just holding away from the ledge or in the direction that you

want to jump, it appears Tequila Works has instead opted to institute their own rather odd movement scheme that sees you having to point in the direction that would correspond to Enu's perspective instead of yours. This can lead to some rather unfortunate deaths during the otherwise good exploration platforming. That said, death is only really a momentary pit stop for Enu, as the boy respawns at the most recent checkpoint, of which there are many. It's lucky that death isn't too invasive, or some sections in the second act would become very frustrating as Enu is chased by a giant, bony desert bird.

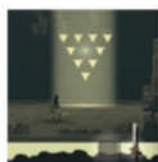
Rime isn't a long game. It only lasts for as long as it needs to - around six hours or so - and that is enough. It's a

gorgeous game, both in terms of the graphics and emotionally. There is no real danger, no real threat and, on a mechanical level, no HUD, leaving players to step into the world of Rime, savour its delights and tackle the puzzles at their leisure, taking pleasure in the act of finding a puzzle, rather than simply from solving them.

DANIEL WILKS **PC**



OR TRY THIS:



SUPER-BROTHERS: SWORD & SWORCERY
CAPYBARA, 2012

▲ Musical adventuring
▼ Combat



THE WITNESS
THEKLA, INC., 2016

▲ Beautiful puzzling
▼ Amnesia



ABZU
GIANT SQUID, 2016

▲ Stunning adventure
▼ Mostly aimless

VERDICT:

Rime is a gorgeous, gentle and sad journey through a strange land. Let it wash over you.

9

Strafe

Best Website of 1996

DEVELOPER PIXEL TITANS
PUBLISHER DEVOLVER DIGITAL
PRICE \$19.96
AVAILABLE AT STEAM
strafe1996.com

Strafe attempts to tap into our nostalgia for '90s shooters like Quake and Doom, while adding map randomisation and roguelike elements as something of a modern twist. The game succeeds a bit at both.

Getting started, players pick one of three guns: an automatic rifle, a shotgun or a railgun/pulse rifle (answer depends on whether you're in the Q3 or UT camp), before teleporting aboard the starship Icarus, where you'll immediately notice things have gone pear-shaped. As you venture from room to room slaughtering freakish grunt after grunt, you'll find several single-ammo-clip gun pickups that offer a short-lived way to deal a bit more damage to the horde around you.

Relying on one primary weapon will make you more conscientious of landing satisfying headshots, while a scrap collection and item purchasing mechanic will have you holding out for that next clip of ammo or a piece of armour. This is a nice way of creating tension and adding strategy to a game that otherwise has enemies mindlessly charging at you.

While it evokes a great many of the tropes of old, the game never really feels like a retro shooter so much as a stylised, low-poly-but-clean and attractive looking experience. Strafe is fun, challenging too, but the '90s essence the game attempts to emulate feels more like a couple of respectful nods - but that's nice too.

I found the most striking resemblance to those classic shooters was a bunch of sunken light-paneled flooring sections throughout the maps; those light panels seemed to



We can't believe the gun model isn't centred at the bottom of the screen.

the '90s essence the game attempts to emulate feels more like a couple of respectful nods

WHY SHOULD I CARE?

+ You want to get some

+ You don't heed the surgeon general's warnings

+ You want your face melted

be everywhere in Doom and Quake. Single-minded enemies bearing down on the player, story-free propulsion from one impractical room to the next, map design and a bit of keycard collection are also reminiscent of a simpler era.

There's also plenty of gibbing to be done and with limbs and heads severed so easily you'll find you've painted rooms red with blood once the bullets stop flying. The game even keeps stats on this as a measure of the damage you've done during a playthrough.

All that said, the game doesn't really need to push the '90s conventions too hard because it's got its own thing going on with the

dynamic levels, permadeath and scrap collection gameplay.

There's a good array of enemies to keep you on your toes, and while the simplicity of the AI appreciably fits within the scope of the game's ambitions, it sometimes feels like they're too easily triggered to engage you, often walking quite a ways from their patrol zones to come and get you. This makes it easier for a you to get away with staying in one spot, starting some chaos and shooting the proverbial fish in a barrel. The game is at its best when you're frantically strafing (funny that) around a room, dodging dozens of enemies and making like a bull in a red paint shop.

MICHAEL JENKIN

OR TRY THIS:



HEAVY BULLETS

TERRI VELLMANN, 2014

▲ Crazy neon polygons

▼ One gun



ELDRITCH

MINOR KEY GAMES, 2013

▲ Lovecraftian procedural FPS

▼ Fickle RNG



PARANAUTICAL ACTIVITY

DIGERATI DISTRIBUTION, 2013

▲ Quake-style Rogue-like

▼ Dubstep soundtrack

VERDICT:

Frantic action, excessive gore and challenging progression with a touch of nostalgia that is a laugh while it lasts with little depth.

7

Huge Power, Tiny Package



CHRONOS
BY **ORIGIN** PC

“Origin’s Chronos Gaming PC, without a doubt, tops our charts in regards to performance and takes the crown even at half the size as the other contenders.”

Steven Bassiri, TweakTown Editor

Configure Yours Online today - originpc.com.au



Prey

Pray you don't run out of bullets...

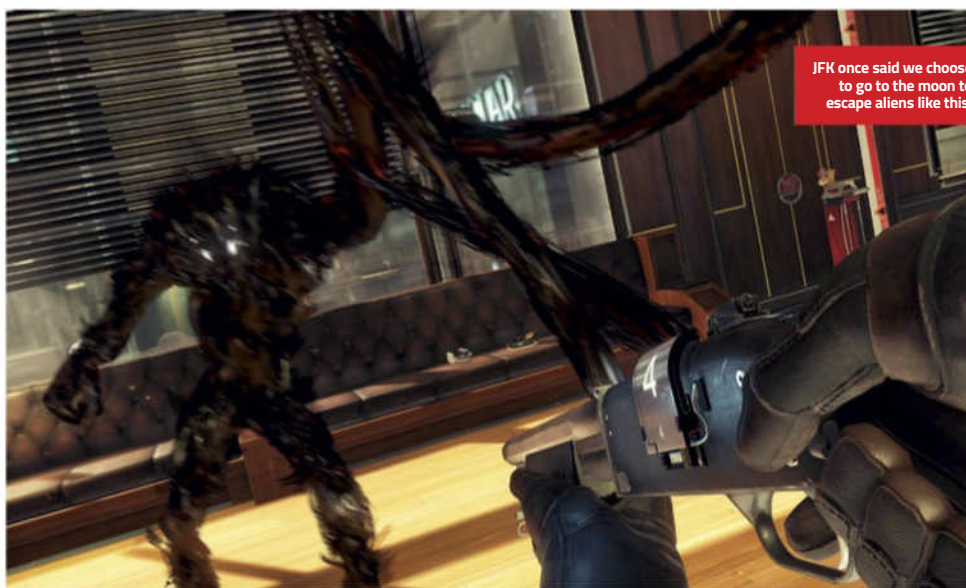
DEVELOPER ARKANE STUDIOS
PUBLISHER BETHESDA SOFTWORKS
PRICE \$79.95
AVAILABLE AT STEAM, RETAIL
prey.bethesda.net

What a fascinating history the Prey brand has. This game bears no resemblance to previous titles – either the first Prey that came out in 2006, or the much-liked and non-released Prey 2, promised by Bethesda but eventually cancelled back in 2014. In fact, the only real link is in structure – you're alone, in space, and you have to fight aliens with strange powers with your own strange powers.

But Prey – the 2017 Prey, which is all we'll talk about from this point – also has its own rich history, albeit one that is internal to the game. In this world, JFK lived, more money went into the space program, and the US and Russia build a large station in orbit to house a hostile alien species – the Typhon. By 2032 and the game's modern day this station is now a giant corporate concern, and run by the Transtar corporation, and is the centre for their research efforts into fusing alien neural patterns with human ones.

It's kind of baroque, but it's a great excuse for giving the player a mess of funky toys to play with.

The game begins with not just one, but two fairly effective bait-and-switches that quickly alert the player to the fact that not all is as it seems. These sequences are wonderfully played out, using many of the established tropes and effects of video games to good effect. These early parts of the game also pay homage to a couple of other classic titles – namely, Half-Life and System Shock. In fact, if space were limited, that would be the most effective capsule review right there, as Prey builds on a lot of the mechanics and systems of those earlier titles, along with a healthy smattering of



JFK once said we choose to go to the moon to escape aliens like this.

Prey is designed to be played in numerous ways, but simply gunning your way around is impossible

WHY SHOULD I CARE?

+ You like needles in your eyes

+ You fear inanimate objects

+ You believe your life is an experiment

the kind of stealth and skill-based gameplay that Arkane has become known for with its Dishonored series.

As Morgan Yu – whose memory is conveniently a blank slate at the game's beginning, thanks to some voluntary neuro-trickery – you have to piece together the puzzle of just exactly what's gone wrong on the station. The Typhon – shape-changing aliens of various power and sizes – are loose, nearly everyone's dead, and there's obviously some kind of plot afoot.

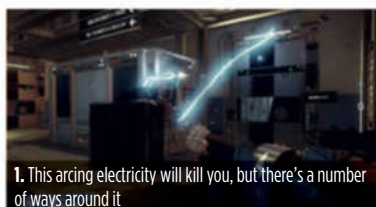
The game is arranged in a series of linked locations, connected by various hubs. Each one is large, open, and riddled with secrets and different ways to get around various impasses. You might use your GLOO gun to create an



impromptu stairway to get from one point to another, or if you've invested your neuromods – Prey's in-game equivalent of skill-points, which are collected around each level – in hacking, you might be able to brute-force your way through locked doors without scrounging for passkeys. Similarly, if you've opted for points in

SEQUENCE

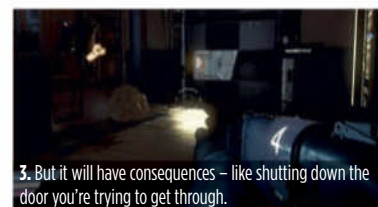
A SHOCKING TURN OF EVENTS...



1. This arcing electricity will kill you, but there's a number of ways around it



2. Like finding a junction box, and cutting power.



3. But it will have consequences – like shutting down the door you're trying to get through.



FEAR THE THINGS

1. Staying stealthy can help keep Morgan alive - if you have the relevant neuromods

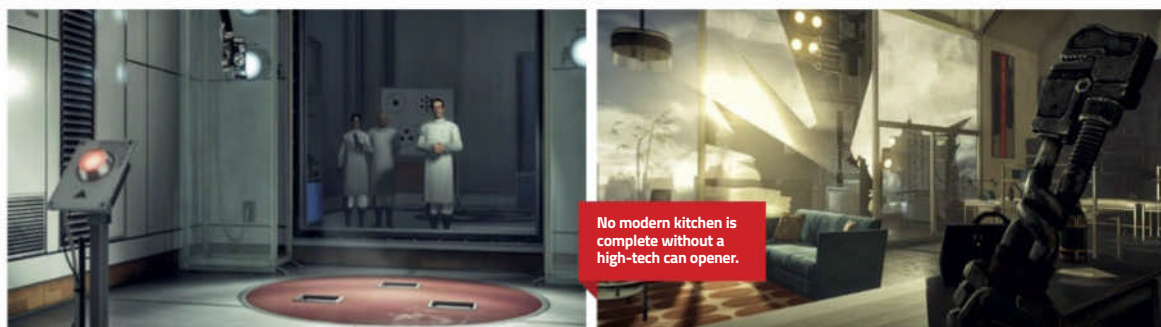
2. The Typhon are nasty and the small Mimics can disguise themselves as anything

3. The goo on the walls comes from one of the weapons. It freezes enemies in place and can stop electricity arcing

4. Morgan isn't that hardy

5. Could be another Mimic

6. Morgan Yu, Gordon Freeman wants a word



strength, you can lift – and even throw – heavy pieces of furniture to find hidden access paths.

Prey is very much an Arkane game, designed to be played in numerous ways, but – also a very Arkane move – simply gunning your way around is impossible. Without upgrades, base weapons aren't all that powerful, and even with upgrades, ammunition is sparse. A crafting system is somewhat of a workaround, but this depends upon finding junk, then getting access to a converter to turn it all into raw materials, and then finding the plans to make those materials into something useful. Sure, you can make more weapon mods and ammo, but you're probably better off crafting as

many med-kits as you can carry. Every resource at your disposal – Psi to use certain neuromod powers, Health, even patch-kits to repair your armoured suit – is limited, so every decision you make in how to spend them will have a follow-on effect.

There are some truly unique things in Prey – the smaller, shapechanging aliens are easy to handle in singles, but in groups, and hiding in plain sight, they can be a real challenge – but by and large it makes its name in its level of polish. Level design is both aesthetically complex, to mirror the different stages of the space station's construction, and intuitive, in terms of how things work and are laid out. Each weapon feels perfectly in balance with

the game and its environments, and the overlapping systems of inventory management, crafting, funky gear, and growing neuromod powers makes for a diverse set of mechanics from which whole sections of drama and gameplay can emerge organically.

But at its heart, Prey is very much built on the shoulders of games that have come before it. It doesn't have the same fresh feel, say, of Dishonored, and while it borrows heavily from System Shock and Half-Life, it never feels quite like it gets out from under their shadow, either.

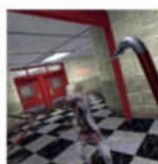
Mind you, if you do have to build on the shoulders of giants, there are worse giants to build upon. **DAVID HOLLINGWORTH**

OR TRY THIS:



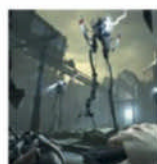
SYSTEM SHOCK 2 IRRATIONAL GAMES 1999

▲ Still one of the greats
▼ Graphics slightly dated



HALF-LIFE VALVE 1998

▲ Still one of the greats
▼ Graphics slightly dated



DISHONORED ARKANE 2012

▲ Great if you hate SF
▼ Those poor whales

VERDICT:

A great game of action and exploration, with rich, interlocking mechanics. May be a little bit derivative, but a tonne of fun nonetheless.

8

The Surge

Industrial Revolution

DEVELOPER DECK 13 INTERACTIVE
PUBLISHER FOCUS HOME INTERACTIVE
PRICE \$49.99
AVAILABLE AT STEAM, RETAIL
thesurge-game.com

The dark, mechanised future of The Surge seems to have taken some inspiration from the horrors of the modern industrialised world, giving the game both a sense of bitter familiarity and some satirical bite. Anti-suicide signs dotting walkways above production lines and HR inanities about happy work families bring to mind the horrific stories of deaths at the Apple factories in China. These little details add a wonderful sense of place to The Surge. Even though the levels are overly convoluted for what is ostensibly a factory and each area has its own style and colour scheme, the small details flesh out the world of the game, making you actively want to explore. Unfortunately the actual story isn't handled nearly as well. It picks up by the second half of the game, but that still leaves you with eight odd hours of vague hints and grinding.

From the very outset it's obvious that things aren't going to go well for Warren, the protagonist of The Surge. A paraplegic, he heads to the alarmingly militarised HQ of CREO, a medical device manufacturer and shady mega-corporation, to sign up for work/a cure. In exchange for an exoskeleton that will allow Warren to walk again, he will work for the company as, for all intents and



■ attacking an unarmoured arm or leg can lead to crippling wounds that incapacitate an enemy ■

WHY SHOULD I CARE?

- + You can walk!
- + You fear technology
- + You want to smash the system
- + You have a hate-on for robots

purposes, an indentured servant. Strapped into an automated surgical suite, a calm voice says that the squirming and panicked Warren has been fully sedated and the exoskeleton is bolted to his body. He's then dumped outside the facility, a failure, forced to fight to survive against other experimental rejects. Happy times.

There are no classes in The Surge – instead Warren can choose between one of two exoskeleton types at the beginning of the game; fast and nimble and slow and strong. Real customisation comes through the use of implants – chips that take up part of Warren's exoskeleton's power and grant him special abilities, such as being able to detect hidden or interactive objects,

see enemy health bars, detect enemies and the like.

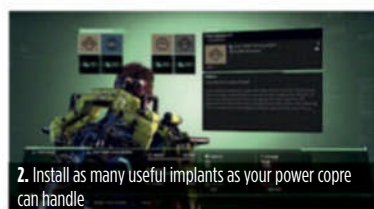
Although the Souls games are an obvious inspiration for The Surge, Deck 13 has also looked to expand on some ideas introduced in their previous hardcore action RPG, Lords of the Fallen. Much like the Souls games, the player gathers resources (scrap in this case) by defeating enemies. This resource is used for levelling and crafting so is vital to progress. Each subsequent kill after the first adds a multiplier to the amount of scrap dropped, with the counter being reset by death or if you decide to deposit your accumulated scrap. Scrap that is dropped when you die can be collected if you make it back before a timer runs



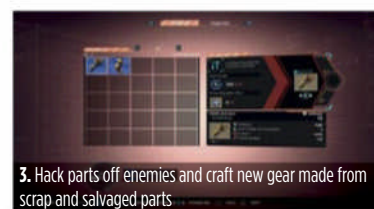
SEQUENCE SELF HELP



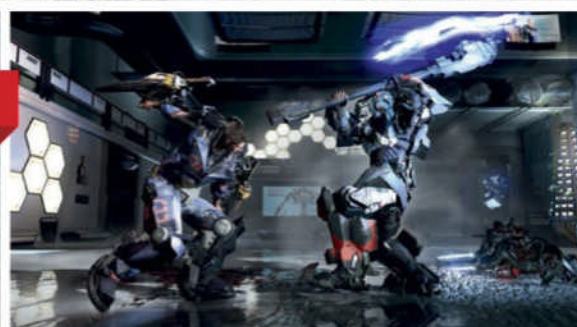
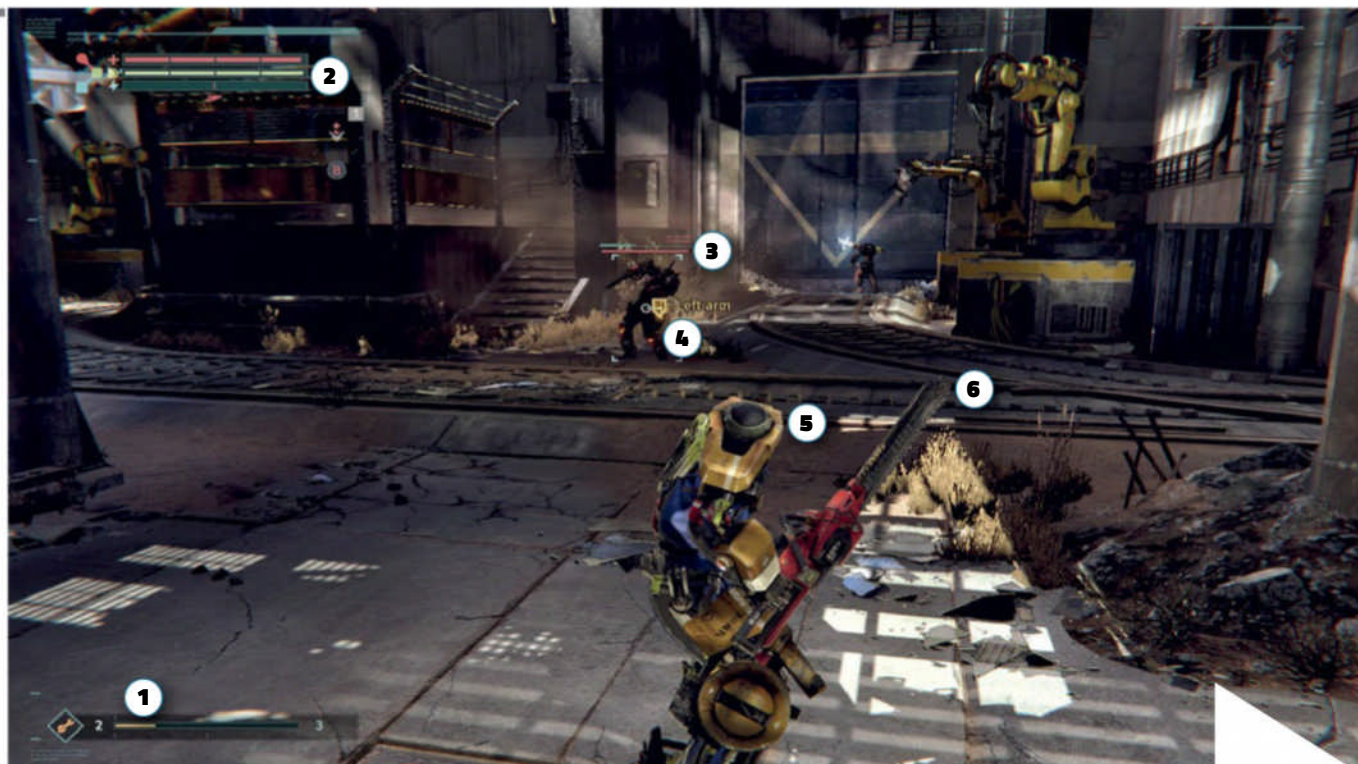
1. Upgrade your power core



2. Install as many useful implants as your power core can handle



3. Hack parts off enemies and craft new gear made from scrap and salvaged parts



ANATOMY OF MURDER

1. Warren gains skill with weapon groups with repetitive use
2. The three bars represent health (red), stamina (yellow) and power (blue)
3. Being able to see enemy health bars is tied to the first implant you get in the game
4. The yellow marker denotes which area of the body you are currently targeting
5. Armour is situational - Warren only has heavy armour on his right side
6. Despite being a chainsaw, this is a fast, relatively low damage weapon

out, but thanks to respawning enemies this can be difficult if you've progressed deep into an area. This leads to a nice risk/reward balance. You can keep pushing forward for more reward, but your chances of losing it all grow the further you get from the spawn area.

This risk/reward dynamic is also very present in combat. Fighting is a careful, tactical affair, with Warren being able to target individual parts of an enemy to attack. Attacking an unarmoured body part does more damage and finishes a fight easier – attacking an unarmoured head can lead to a quick kill outright, but an unarmoured arm or leg can lead to crippling wounds that incapacitate an enemy for a swift coup-de-gras. That

may sound ideal, but killing an enemy in that way only rewards Warren with some scrap. This is good for improving your exoskeleton so you can equip more implants, but if you want to improve your armour or weapons you have to live dangerously. The only way to find upgrades in The Surge is by cutting them off enemies.

Any equipment you see on an enemy can ultimately be cut off and used, but trying to sever a limb or bisect a torso takes a fair bit more effort than just hacking away at an unarmoured body part. This method of upgrading turns combat into a whole different beast than any Souls game. Warren can't block and a few hits can take him down easily, so rather than blocking or dodging attacks

and looking for an opening, players really have to create their own openings through positioning. Say you want to cut off an arm. Before you can strike the final blow you have to first weaken the armour, but to do that you have to continuously place yourself in striking distance of that arm. As a result combat often feels slower and more tactical than in the Souls series.

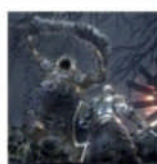
As good as the combat can be, The Surge doesn't quite live up to its promise. The world is fantastically realised but the story is obtuse until it gets rote. The Surge is a far better game than Lords of the Fallen. If they continue apace, the next ARPG from Deck 13 should be a masterpiece.

DANIEL WILKS **PC**

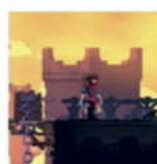
OR TRY THIS:



DIVINITY II: DEVELOPER'S CUT
LARIAN STUDIOS, 2012
▲ Become a dragon
▼ No exoskeletons



DARK SOULS 3
FROMSOFTWARE, 2016
▲ It's Dark Souls
▼ No strategic dismemberment



DEAD CELLS
MOTION TWIN, 2016
▲ Roguevania Souls
▼ Early Access

VERDICT:

Despite some pacing and story flaws, the thoughtful, tactical combat is always engrossing.

8

Regalia: Of Men and Monarchs

The petal is mightier than the sword

DEVELOPER PIXELATED MILK
PUBLISHER KLABATER
PRICE US\$25
AVAILABLE AT STEAM, GOG
regaliagame.com

Just days into my reign as the new Lord of Ascalia, I decided to take a trip to Falgarwood. My council, consisting of my two sisters, my bodyguard, and the cranky ghost of a long dead ancestor, thought it'd be a good idea to get to know the area. Let the local peasants put a face to the name, that sort of thing. It'll demonstrate that you care, they said.

A few days later, far from winning over the hearts and minds of my people, I'm lost in the sprawling wildwood, fighting for my life against a pack of balefolk - or animated trees. Balefolk have this special ability, you see, where once they lose 50% of their health they can cast a spell called Petal Dance. The first time I saw one of them do this, conjuring up a swirl of leaves to orbit its trunk, I thought it was cute. When the second one did it, I grimaced. When the third one did it, I quit the game in disgust.

It took me a while to work out what was going on. Why did Griffith my bodyguard, the tank of this operation, lose 300 hit points that turn even though he wasn't attacked? Wait, why is he now dead? And, hang on here a minute, why is Signy, the swift damage-dealer of the party, also mysteriously dead? And, ohferchissakes, now I'm dead too.

Petal Dance, you see, not only gives these damn trees a huge buff to their shields, which under Regalia's combat rules you must first deplete before you can inflict any real damage to an enemy's health. It also does a ridiculous amount of real physical damage to each member of your party every single turn no matter where they are on a grid-based battlefield. It's



■ a foundation of turn-based combat supported by some light base-building and dialogue options ■

WHY SHOULD I CARE?

- + You need more than a standard attack
- + You enjoy chatting between each fight
- + You can tolerate anime hair

insane. It's infuriating. It's what lead me to force-quitting then sheepishly reloading my previous save once I'd recovered my composure.

It's also a good example of how Regalia wants you to play its combat. This is a strategy RPG built on a foundation of turn-based combat and supported by some light base-building and dialogue options. What's novel is that in combat you don't get a basic attack. Every action in combat is a special skill, all of which operate on turn limited cooldowns.

Kay, the main character, has skills that range from buffing ally's shields and attacks to a ranged attack that weakens an enemy to a low-damage melee attack that hits multiple targets.

Other party members have their own, increasingly diverse, array of abilities. The challenge of each encounter is managing the best turn to use each skill while also countering the skills the enemies throw at you.

I eventually overcame those bloody balefolk and their Petal Dance garbage. I realised I had to focus my attention on one tree at a time, using Kay to buff Signy and Griffith so they could kill it quickly before it had the chance to cast.

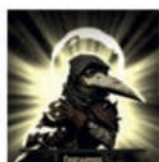
We've rebuilt much of Ascalia now, and I think even the local peasants don't hate me too much. The castle renovations are looking pretty good, too.

Especially since I chopped down all the bloody trees. **DAVID WILDGOOSE**

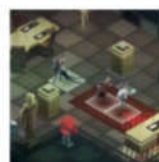
OR TRY THIS:



THE BANNER SAGA 2
STOIC, 2016
▲ Solid SRPG
▼ Overly serious



DARKEST DUNGEON
RED HOOK, 2016
▲ Addictive
▼ Got a light?



INVISIBLE INC
KLEI, 2016
▲ Tactically sound
▼ No trees

VERDICT:

A quirky approach to turn-based combat.

7



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CHRISTIE

Endless Space 2

This supplementary volume also lacks a point of termination

DEVELOPER AMPLITUDE STUDIOS
PUBLISHER SEGA
PRICE \$39.99
AVAILABLE AT STEAM
endless-space.com

The space-empire 4X turn-based strategy genre is, to my mind, one of the most prescriptive in gaming today. To the untrained eye, all 4X games appear the same - the galaxy map, the tech tree, the million billion buttons and icons, and the same basic progression. Start small and primitive, explore, expand, exploit, and exterminate.

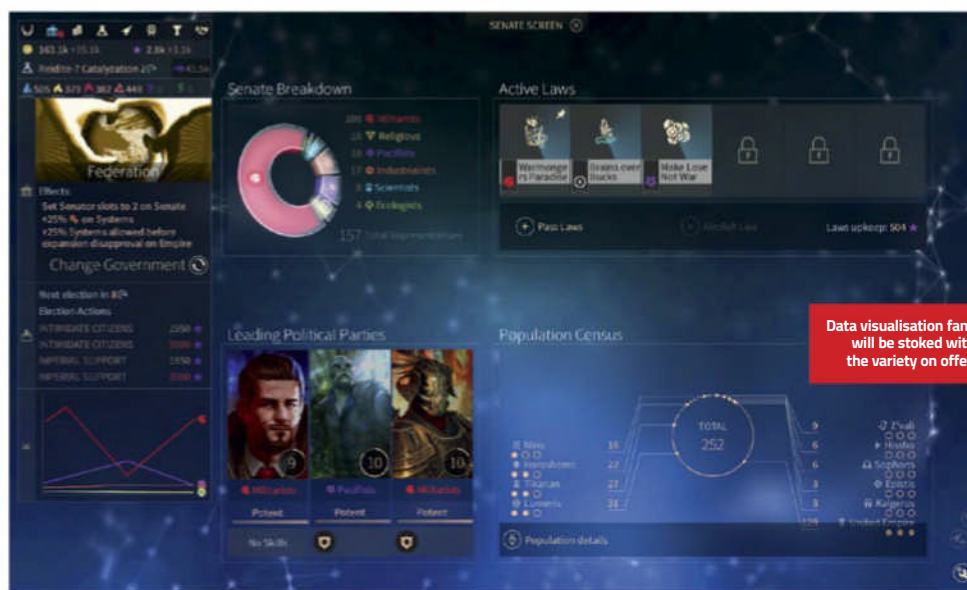
From the time the genre appeared with *Reach for the Stars* in 1983, to maybe 2015, the pace of new 4X releases remained manageably steady. But for some reason, now we're getting all the 4X games, all at once. The fine details are different but overall each of these games offers the same promise (create an empire and rule a galaxy), and demands the same sacrifice (thousands of hours of your time).

Titles include *Master of Orion 3*, *Stellaris*, *Galactic Civilizations III* and its expansion, and roughly one metric fuckload of clones and Kickstarter wannabes.

So why would you choose *Endless Space 2* over anything else? In a genre where every game is essentially the same, how does a big-budget AAA-by-4X-standards title stand out?

ES2 is of course a second run for Amplitude that builds on its very solid *Endless Space* and *Endless Legend* successes. *Endless Space* showed us that 4X could be beautiful and have a lovely interface, and after a time - or a few times, anyway - Amplitude got around to actually finishing the game and making it more than a pretty face.

The big insult you can throw at a 4X space empire game is to call it "just another *Master of Orion 2* clone". So inasmuch as there is a spectrum or



/// races such as the Horatio, who consist of nothing but clones of a single eccentric hyperbillionaire ///

WHY SHOULD I CARE?

- + You dig Amplitude's take on 4X
- + You're sick of waiting for the community to make *Stellaris* good
- + The slick fanciness of the interface is all that matters to you
- + You don't really care about diplomacy

metric we can apply to these thing, "least like MOO2" might have to do.

ES2 does a lot to differentiate itself from other games, while maintaining a non-negotiable core set of mechanics.

The races are inventive. Rather than cat people and raccoon people and lizard people and tree people, there are races such as the Riftborn, who are fleeing a different dimension. Or the Horatio, who consist of nothing but clones of a single eccentric hyperbillionaire. Or the Sophons, who are super good at inventing stuff and making scientific discoveries... but not so good at NOT accidentally blowing up their moon.

Oh wait, there is a race of tree people actually, the Unfallen (geddit),

who slowly grow vast vines between star systems.

Each race starts with a homeworld, a scout ship and, interestingly, a pre-built colony ship. A quick scout of the surrounding star systems will reveal the player is safe inside their own constellation, and probably won't face large-scale invasion until later in the game when space travel tech that allows wormholes etc gets unlocked.

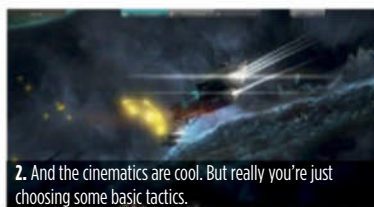
Scouting initial star systems and finding "anomalies" that provide various bonuses happens quickly. Finding a suitable colony world and sending the colony ship there comes next. Transforming the resulting "Outpost" into a fully-fledged Colony can take as long as 20 turns. And

SEQUENCE

THESE VIOLENT STARS...



1. The pretty interface makes combat space-battle screenshots LOOK deep and tactical and exciting.



2. And the cinematics are cool. But really you're just choosing some basic tactics.



3. Ground battles are only necessary if you can't wait to blockade and starve out the planet.



finding a THIRD world to settle may not happen for some time, at least not until tech that allows settlement of different world-types is unlocked. Why does this matter? Because Score Victory is declared when reaching a turn limit (usually 127, but this can be tweaked).

Scout ships are equipped with probes that can be micromanaged into exploring beyond starlanes, new tech enables the discovery of new anomalies, and so in this way exploration remains part of the game almost until the end.

A recent trend in 4X is the inclusion of multiple population types - political factions, races, even species - on a single planet. ES2 takes this to the next level. Not only are certain bonuses awarded and sub-quests completed for increasing population diversity, successfully conquering another world simply turns those aliens into "your" people. Other games magically convert two billion Flangeoids into humans, but in ES2, they stay ugly, and grumpy... until you convince them life is now better under human rule.

There's a downside to this, in that cosmopolitanism - which in the real

world creates new and vibrant cultures - in the context of a game just tends to make the major factions seem all kinda the same.

There are individual unlocks on the tech tree/web for each race, but mostly everything is the same. There are even nonsensical things, such as the non-eating Riftborn having heroes who boost food production...

Diplomacy, as always, is a disappointment. Part of it is communication through the complex interface. Aliens will threaten your empire, and set ultimatums, and then you'll forget about them until a dozen battlecruisers appear in your home system.

Other races, meanwhile, will belligerently declare war on you, because they have three ships now! Sure, you have like 22, but confidence is key, right?

Perhaps choosing a 4X game to sink your next statistically-significant chunk of your life into isn't about gameplay gimmicks, though.

Perhaps it's about acknowledging that these games have one job: to make you feel like you are directing the fate of an entire civilisation among the



stars, while minimising the necessarily cumbersome and hypercomplex gameplay this requires.

Endless Space 2 does a good job of this. Sleek interface, some cool new concepts... but maybe it lacks that certain something, that vibe that makes it impossible not to have "just one more turn".

The worst, most pathetic final comment a videogame reviewer can give on a review is "if you like this kind of game, then you'll like this" and yet... that sentiment is just so APT for 4X.

Endless Space 2 won't bring new fans to the genre. And it won't Eclipse (boardgame reference) your memories of MOO2 or even Imperium Galactica.

But it will scratch that 4X itch. And look good while it's doing it. **ANTHONY FORDHAM**

ENDLESS TOOL-TIPS

1. Yikes. Learn to read it and things become fairly straightforward.

2. Early on, planets are basic, even the faction homeworld.

3. Subquests give small rewards when conditions are met.

4. Advisors offer baffling advice that won't become relevant for 300+ turns.

5. These bios add much-needed flavour. Also: so many stats!

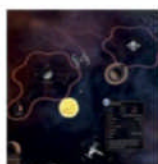
6. There it is. The Button. Data clusters around here (idle ships, research status etc) so you don't miss anything. NOTE: You will still miss a lot of things.

OR TRY THIS:



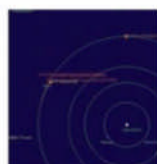
ENDLESS SPACE 2012, AMPLITUDE

- ▲ Shines in multiplayer
- ▼ Disappointing combat



GALACTIC CIVILIZATIONS III 2015, STARDOCK

- ▲ Saved by its expansions
- ▼ Just a reskin of GalCiv 2?



AURORA 2009, STEVE WALMSLEY

- ▲ Incredibly complexity and scope
- ▼ No graphics, interface from hell

VERDICT:

Sleek and competent and detailed and not really very exciting

6

Runic Rampage

RNG Rampage

DEVELOPER ELECTROCOSMOS
PUBLISHER ELECTROCOSMOS
PRICE \$6.99
AVAILABLE AT STEAM
runicrampage.com

There's nothing particularly subtle about Runic Rampage, a Rogue-like hack and slash indie from first time developer Electrocosmos, but that is one of the strengths of the game. There's not much when it comes to eye-candy or bells and whistles, so everything rests on how good the combat feels and how well the action flows. Over the four acts that make up the game, the action flows pretty damn well.

You play a red-bearded dwarf. There's some sort of eminently skippable story about dwarf kings, broken crowns and divided peoples, but it's not really something you will find yourself paying attention to. Instead, you spend your time smashing enemies into gibs, searching the levels for hidden shrines and keys, and trying to finish a level as quickly as possible so as to maximise your rewards and advancement. Best played with a controller, Runic Rampage features a simple but compelling combat system that bases moves on the combination and length of attack and dash inputs. A tap of the attack button triggers a simple attack and a few taps in a row a basic combo. Holding the attack button delivers a heavy attack. Attack and dash together perform an uppercut, two fast dashes perform a jumping attack, two attacks and a dash a spinning attack and so on. The developers have managed to fit in a lot of combat options with only two active buttons.

The third button is used for magic – an attack or buff powered by tokens dropped by enemies. Rather than equipping a single magic effect, new powers are unlocked through



the developers have managed to fit in a lot of combat options with only two active buttons

WHY SHOULD I CARE?

- + You like dwarves
- + You hate pottery
- + You worship RNG

the game and through levelling and which is available is down to what activation token drops. Effects range from simply adding fire damage, to erecting walls of ice or freezing enemies in place (probably the most useful of all magics).

After each level is completed the player is scored on how fast they completed the level, how many enemies were killed, if they managed to get a 30+ hit combo, and discovered the hidden shrine. The higher the score, the more options players have to choose from the six randomly chosen rewards offered. Gold is used to buy new weapons and magic or upgrade existing weapons and magic. Armour can only be upgraded by finding all the

components of an armour set. Runic fragments unlock the boss at the end of an act. This is where the RNG core of Runic Rampage falls down a little. The armour sets are more a completionist thing, so not having all the pieces doesn't overly impact the flow of the game, but having to rely on RNG to unlock bosses is very frustrating.

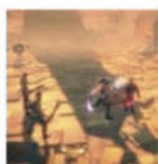
There isn't a whole heap of replayability in Runic Rampage, and the game, RNG willing, isn't that long, but if you're a fan of a bit of hack and slash, and have seven or so dollars to spare, you could definitely do much worse. It may not be a deep, immersive game, but while you're playing it's a great distraction.

TAVISH FORREST

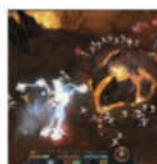
OR TRY THIS:



FORCED
BETADWARF, 2013
▲ Co-op hack and slash
▼ Poor singleplayer



HAND OF FATE
DEFIANT DEVELOPMENT, 2015
▲ Card based ARPG
▼ Sequel still not out



GAUNTLET
ARROWHEAD GAME STUDIOS, 2014
▲ Gauntlet!
▼ Stupid Elf

VERDICT:

Definitely worth the price of admission. Runic Rampage is simple, moreish dungeon bashing.

8

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DVD Contents

The Online Editor, David Hollingworth is currently in Russia for a World of Tanks event, so it's only fair that we include some Wargaming goodness of the DVD this month. World of Tanks Blitz is the 7v7 multiplayer hit that has taken professional gaming by storm. It's also really fun.

If that's not yopur speed, then we have a bunch of other stuff on the disk as well from visual novels to action, adventure, VR and more. If you can't find something you like, you're probably not looking hard enough.

As always, if you have a suggestion for something you'd like to see on the disk, get in touch via the forums or by emailing letters@pcpowerplay.com.au and we'll see whgat we can do to oblige.

The PCPP Team.

33 FREE GAMES AND DEMOS!

- Boofle's Home
- Bitdude
- ComPet - Beast Battles
- Dawn
- Dimensional Rift
- Elsewhere High: Chapter 1 - A Visual Novel
- Fovos VR
- HEBEREKE!: March! Red Army Girls' Brigade
- HERO-E
- Heroes of Dire
- Into The Unknown
- Kiya
- Legend of Numbers
- Nick
- One Eyed Kutkh
- ONRAID
- PHAT PHROG
- Pixel Fodder
- PolyDome
- PROTOThYPE
- RAYGUN COMMANDO VR
- Red String of Fate
- Reflection of a Fallen Feather
- Sounds of Her Love
- Stargunnera
- Strike.is: The Game
- SYNCH
- Think To Die
- Time Leap Paradise SUPER LIVE!
- ULTRAWORLD EXODUS
- VR Battle Grid
- World of Tanks Blitz
- Wrecked: Get Your Ship Together



World of Tanks Blitz

Installation instructions included on the disc. Browse the disc and launch **index.html** for more.

USING THE DVDS

PC PowerPlay DVDs are suitable for use in almost any computer but the software contained on the medium is for Windows operating systems only. Because each PC is different, PC PowerPlay and Next Media cannot guarantee the DVDs will operate as expected on every system, despite strict adherence to Windows compatibility.

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The DVDs are set to autostart. On insertion it will load the DVD's Terms and Conditions of Use disclaimer in your default Web browser. If the DVD failed to autostart, you can load the menu manually by running the file called start.htm in the root directory using Windows Explorer.

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INSTALLING SOFTWARE

Simply click the install/download link under a file's description to launch the installation program. please ensure that all other programs are closed and that any anti-virus software is disabled before performing a software installation. Due to STEAM region locking, not all content may be available toutside Australia.

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Vanquish

Kneel before Mikami

DEVELOPER PLATINUM GAMES
PUBLISHER SEGA
PRICE \$19.99
AVAILABLE AT STEAM
vanquishgame.com

It's hard to tell if Vanquish is a typical example of the broad-shouldered, chain-smoking, constantly angry and edgily swearing machismo that was so prevalent in action games released around 2010, or whether it is a parody thereof. The testosterone is laid on so thick that you can almost smell it and Sam Gideon is such a man's man that you could easily see the game as a parody, but the fact that Platinum plays everything so straight and cheerless that could be a mistake. The story of Vanquish does nothing to help - some evil Russian robots are trying to take over the world using a space laser that makes heads explode, because that's what robots/Russians do, and Sam Gideon and his magical slidey suit are the only thing that stand in the way of Communist robogeddon.

Vanquish looks its age. It's not an unattractive game but it is kind of bland in a Michael Bay Transformers meets Roland Emmerich disaster porn kind of way. The game also sounds its age with an exceedingly forgettable soundtrack and some pretty naff voice acting. The cutscenes are pretty average too. All that fades into nothingness however, when you discover the power of sliding around on your knees.

Platinum Games has a reputation for amazing action, and PC gamers have finally had a chance to sample their wares with the recent releases of the amazing Nier: Automata and the equally awesome Bayonetta. While not quite reaching the giddy heights offered by the aforementioned games, Vanquish still dishes out the goods when it comes to action, thanks to excellent level design and a



The standing drop-kick may have been effective on RAW, but it's useless here

■ Gideon's super-suit gives him the ability to rocket across the ground by sliding on his knees ■

WHY SHOULD I CARE?

+ You're a broad-shouldered man's man

+ You have five o'clock shadow all day

+ You smoke because it's edgy and cool

+ You like to scoot around on your butt

form of movement so satisfying and dynamic that you'll want to do it as much as possible.

Most fights in the game take place in large, open areas, giving the player heaps of room to move around. There are obstacles everywhere that Sam Gideon can take cover behind, but playing as a stop and pop shooter would make for a very unsatisfying game. Gideon's super-suit gives him the ability to rocket across the ground by sliding on his knees (or arse as it sometimes appears). While sliding time slows, enabling our manly man of a protagonist to avoid bullet hell swarms of projectiles and dispatch scores of robo-russkies. The suit only has a limited power meter, so no matter how

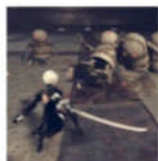
appealing sliding is, you can't do it all the time.

Sliding may be limited but the time slowing isn't locked to manual activation - it kicks on automatically when you need it most. When you're at death's door, time slows and you have a chance to turn the situation around. When you run out of energy for the suit the same happens for an instant allowing you to get to cover to regenerate. You'll still die a lot, but those moments of slow motion carnage make death fun rather than a roadblock.

The PC Port of Vanquish is excellent. Not only does the game run buttery smooth, the mouse and keyboard controls feel better than using the controller it was built for.

DANIEL WILKS

OR TRY THIS:



NIER: AUTOMATA PLATINUM GAMES, 2017

- ▲ Awesome combat and story
- ▼ No scooting



BAYONETTA PLATINUM GAMES, 2017

- ▲ Sexy witch action
- ▼ Bayonetta II not available



MAX PAYNE 2 REMEDY ENTERTAINMENT, 2003

- ▲ Bullet time and arsehole physics
- ▼ Max Payne 3

VERDICT:

Not Platinum Games greatest title, but still an absolute blast

8

Inner Chains

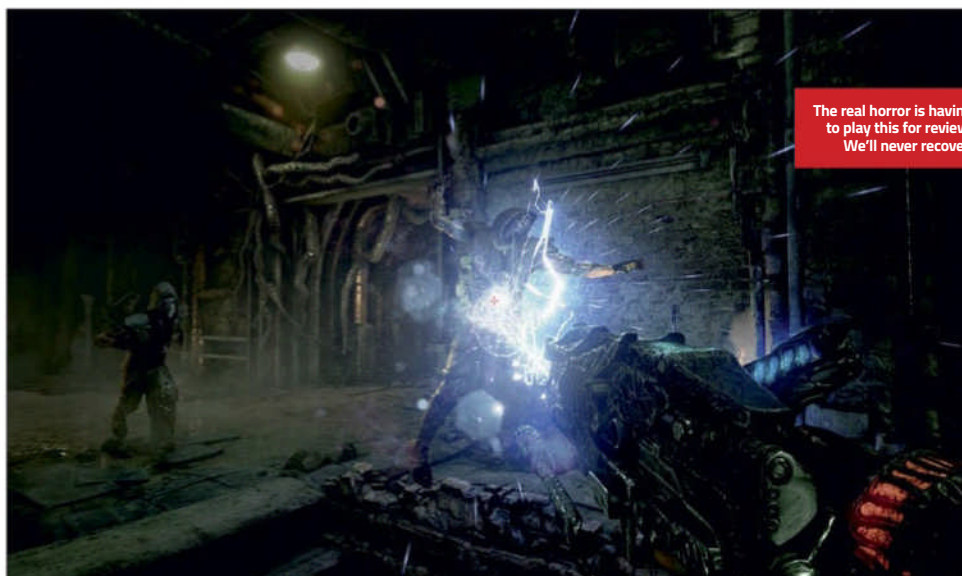
Style over substance

DEVELOPER TELEPATHS TREE
PUBLISHER IMG.N.PRO
PRICE \$19.99
AVAILABLE AT STEAM
innerchainsgame.com

You awake on a horrible biomechanical world and must escape by reaching a place called "Last Hope." That's the premise of horror FPS Inner Chains. It's also pretty much the sum total of the story as well. There's little in the way of narrative throughout the adventure, just the occasional hint that there's something big and bad at play. Without a solid reason for running around the admittedly fantastic looking hellscape, all players are left to ponder are the shooting mechanics and the quality of the AI. From the outset, neither are anywhere near as good as the environments.

The first chapter of Inner Chains is unlike anything else in the game and could definitely lead you to believe it's something other than a below average shooter. The entire first chapter is essentially a surreal walking simulator, with the main character trudging along, activating consoles and experiencing strange visions. It's not great but it's interesting. Come chapter two you start fighting, first with the terrible and ineffective melee system and then with the handful of guns available in the game.

The three weapons, a flamethrower, electric gun and blade thrower all feel equally bad in different ways. The flamethrower will frequently fail to set enemies on fire and sometimes doesn't appear to do anything at all until the enemy inexplicably falls to the ground. The electric gun can only fire for a few scant seconds before it has to cool down, leading to fights with equally equipped enemies being a simple back and forth of shoot, cooldown, shoot again and hope you can shoot a little harder. The



■ a simple back and forth of shoot, cooldown, shoot again and hope you can shoot a little harder ■

WHY SHOULD I CARE?

- + You love Geiger
- + You love Clive Barker
- + You hate games that are fun

blade thrower does little damage and has no impact or weight when it hits. Enemies don't even flinch when shot.

The flamethrower and electricity guns will be your go to throughout most of the game as not only are they more powerful (or at least they appear to be) than the other weapon, they are also linked to progress in the game, as the flamethrower can be used to burn down certain obstacles (so long as you can get them to ignite), and the electric gun can be used to activate consoles at range. That's the sum total of any kind of puzzling.

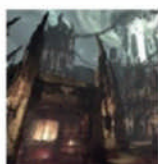
Enemy AI is erratic to say the least. Some enemies will ignore you even if you're standing right next to them, others will path directly through

traps on their patrol routes, killing themselves if you have the patience to wait. Others can see you around corners or from across a map. That wouldn't be as much of a problem if the game didn't have some incredibly strange hitboxes and clipping issues. Some enemies have displaced hitboxes and some environments have massive hitboxes, protecting enemies you can clearly see. In some areas enemies can shoot through pillars to hit you, even though you are supposedly behind cover and out of line of sight. It appears all the effort that went into Inner Chains began and ended with the visuals. It's a great looking game. Such a pity that everything else is rubbish.
DANIEL WILKS

OR TRY THIS:



KILLING FLOOR 2
TRIPWIRE INTERACTIVE, 2016
▲ Gory fun
▼ Best with friends



DOOM
ID SOFTWARE, 2016
▲ Awesome singleplayer
▼ Crap multiplayer



SPACE BEAST TERROR FRIGHT
NORNWAREAB, 2015
▲ Procedural Aliens
▼ Early Access

VERDICT:

Inner Chains looks good, but beneath the veneer is a mess of bad mechanics and disappointing design.

3

Mirage: Arcane Warfare

1001 Arabian Knights

DEVELOPER TORN BANNER STUDIOS
PUBLISHER TORN BANNER STUDIOS
PRICE \$29.99
AVAILABLE AT STEAM
miragearcane warfare.com

Given that Torn Banner Studios released the popular skill based multiplayer game, Chivalry: Medieval Warfare, it's understandable that Mirage: Arcane Warfare has essentially been dubbed "Chivalry with magic" (we're as guilty of that as any other outlet) in the press. The idea sounds similar. Players choose from one of six classes and fight against another team in objective based modes or a deathmatch, but thanks to the way characters play, and the addition of much more in the way of ranged combat abilities, Mirage easily stands on its own feet as an experience quite different to Chivalry.

The six classes each have access to six class specific abilities, three of which can be equipped at any time, as well as some universal skills, such as a basic attack, dodge, parry and counter. Combat feels fantastic, but the approach a player has to take to be successful makes the game feel very different from similar class based multiplayer games with a predominantly melee focus. The class specific abilities are powerful and can cause devastation when they hit, but thanks to both cooldowns and the fact that most moves can be fairly easily countered, combat becomes a matter of misdirection and timing rather than straight up skill versus skill savagery.



■■ could easily exist within a Pixar or DreamWorks film if it wasn't for the violence and gore ■■

WHY SHOULD I CARE?

- + You're a fat man with a carpet
- + You enjoy cartoon eviscerations
- + You prefer the R rated version of Aladdin

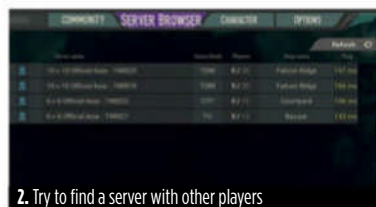
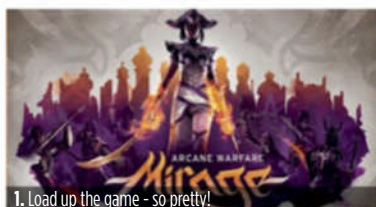
Working with other players is all but a must. The Vigilist, wielder of a spear and shield, is a great class to get an enemy's attention and knock them around the environment, opening them up to swift attacks from the deadly but vulnerable Vypress assassin. Alchemancers are capable of dishing out huge amounts of magic damage but due to slow cooldowns and the ease with which their attacks can be avoided or countered means that they should rely on other players to distract or hamper enemies. The Tinker can create traps, locking enemies in place for the Alchemancer to obliterate.

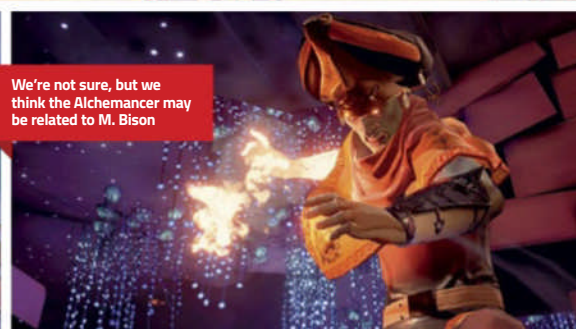
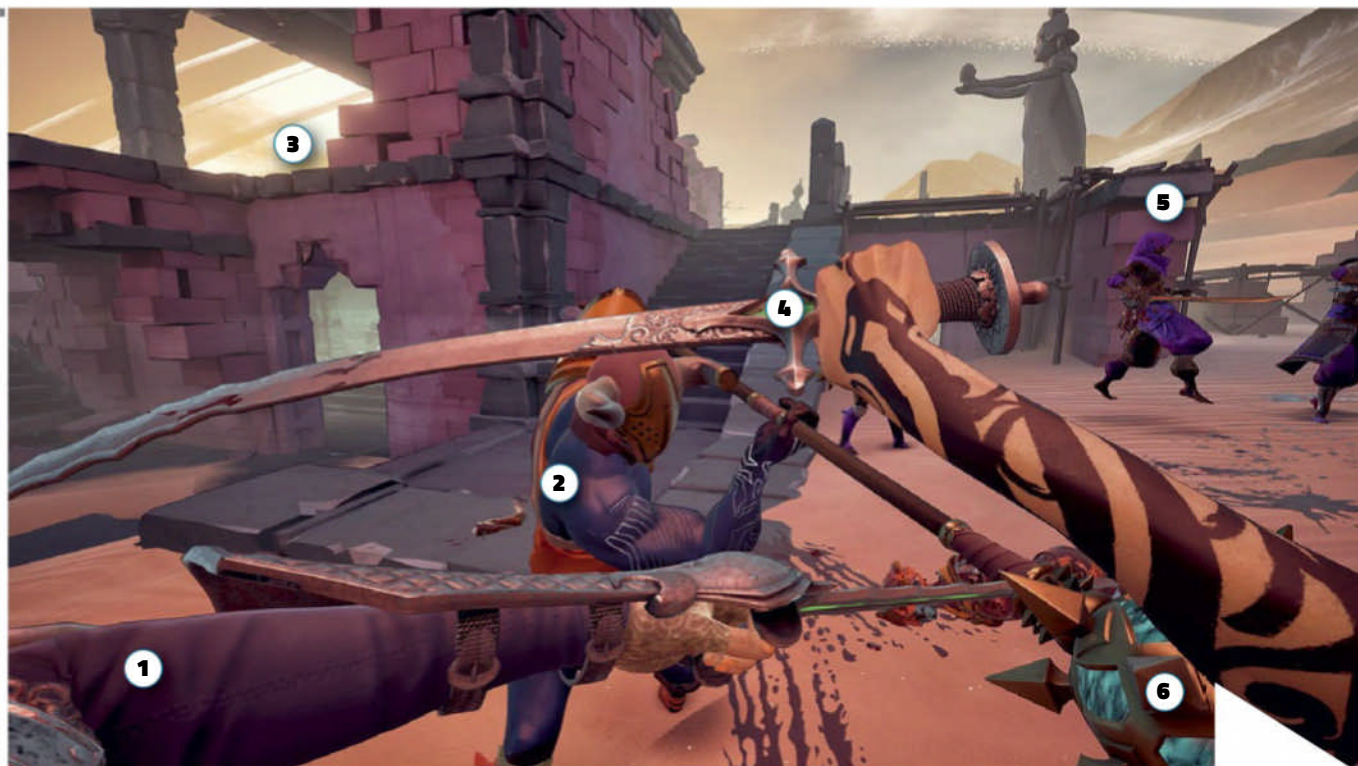
Each of the classes feels sufficiently different and powerful that you rarely, if ever feel constrained by your choice.

There is a rough breakdown between DPS and support classes, with the Entropist, Vigilist and Tinker roughly falling under the support banner and the Vypress, Alchemancer and Taurent falling under DPS, but none are dedicated to the point of being focussed on one specific thing. The Entropist has support magic and a healing ability but can fly on his magic carpet giving him huge mobility for offense. Mobility is a key factor for all of the classes and that is one of the factors that makes combat so much fun. Each class has a unique way they can traverse the maps quickly, from the aforementioned magic carpet (the slowest but most stable form of movement making it double as a combat platform), to teleportation,

SEQUENCE

HOW TO PLAY MIRAGE





HASSAN CHOP

1. The Vypress is the mobile assassin style character - she can be very deadly due to her speed and agility, but she's fragile

2. The Taurent is the opposite. He's the big melee brute capable of Hulk-like leaps

3. Why the Entropist or Alchemancer aren't attacking from range is a mystery

4. Parrying and deflecting is a vital skill

5. A melee Alchemancer

6. All weapons can thrust as well as bash - even the Taurent's huge two handed mace

grappling and jumping. With each class being able to approach battles from a variety of angles, players have to try to be as aware as possible of their environment and all possible angles of approach. Given that friendly fire can be as deadly as enemy fire, you have to know where your friends are coming from as well.

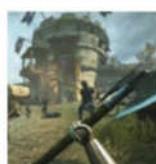
Character design is excellent, meshing well into the Arabian Nights style of the levels but also offering easily identifiable and unique silhouettes for each of the classes, letting players quickly know the general capabilities of opponents easily. Characters and environments are bright and lovely looking and could easily exist within a Pixar or

DreamWorks film if it wasn't for the violence and gore. Blood splashes with each hit, and melee kills will often result in some sort of horrible mutilation, with ragdolling bodies missing limbs, heads or being bisected, the white stump of a spine visible poking from both the top and bottom halves of the body. The level of gore may seem at odds with the otherwise charming design and deliberately anachronistic and silly dialogue, but it works in a grimly funny way. The only time the amount of blood becomes distracting is when a purple teammate appears to be on the red team due to the amount of blood on the character model.

The biggest problem with Mirage

isn't a problem with the game itself but rather the lack of players (at least at the time of writing). Finding a game is proving to be difficult to say the least, and when one does come up it's rarely anything other than a team deathmatch. There's nothing wrong with a deathmatch, but the objective modes much better capture the spirit of the game, as players strive to make the most of bottlenecks and distractions to hack or blow their opponents to pieces. Mirage: Arcane Warfare is every bit as good as Chivalry and in many respects tops it. It's a wonderful, lighthearted but visceral murderfest. Hopefully the community will grow. This is a skill based multiplayer game that deserves a player base. **ARNOLD BURGESS**

OR TRY THIS:



CHIVALRY: MEDIEVAL WARFARE
TORN BANNER STUDIOS, 2012

▲ Great tactical combat
▼ Realistic



FOR HONOR
UBISOFT MONTREAL, 2017

▲ Meaty combat
▼ buggly



WAR OF THE ROSES
FATSHARK, 2012

▲ Deep combat and customisation
▼ Dead

VERDICT:

Thanks to the addition of magic, Mirage breathes new life into the competitive melee arena.

8



Cosmic Trip

Trip the light mediocre

DEVELOPER FUNKTRONIC LABS
PUBLISHER FUNKTRONIC LABS
PRICE \$19.99
AVAILABLE AT STEAM
cosmictripvr.com

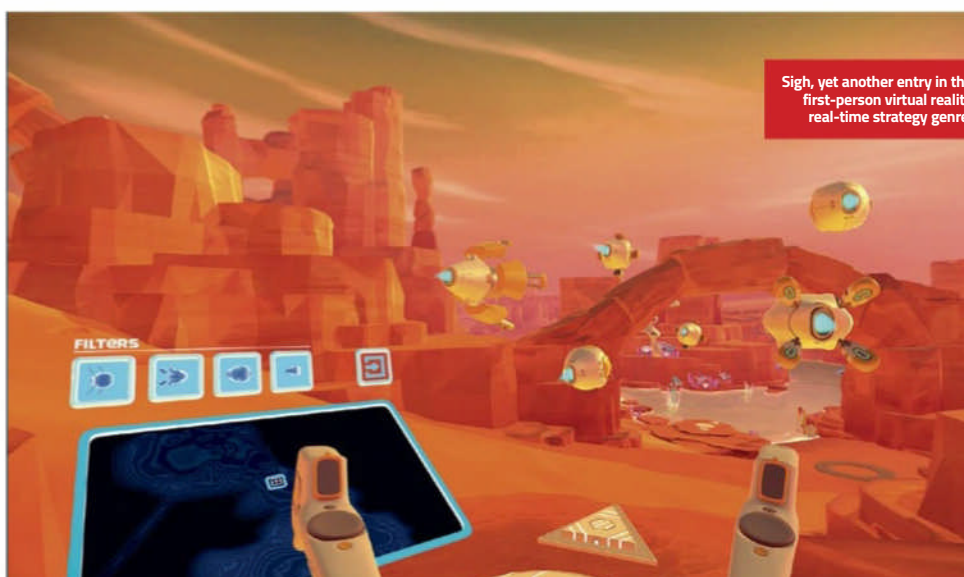
Cosmic Trip is a slickly-crafted first-person VR RTS where the player peers down at the battlefield from above then literally grounds them among the units and structures that produce them. The approach is a refreshing take but may frustrate players more comfortable with a better view of the battlefield.

You'll get started placing bot factories and physically inserting batteries and bot disks using the motion controllers to build units. This works well from both an interactive standpoint and a management one. Battery levels will deplete, and you'll need to keep an eye on when a replacement is due if you want to keep your operation running optimally. Bot disks, which are like the blueprints for a unit, must be bought separately and inserted into a bot factory. It's fun but can feel a little like double handling.

The retro sci-fi art style is great and the user interface design is among the best I've seen in a VR title to date. Floating UIs that appear with the touch of a Vive button and respond to aiming and triggering are fun to use as you select research items, buildings and the batteries that power them.

In addition to your offensive bots and a deployable turret that takes both hands to fire, you're provided with three different controller attachments: a bubble shooting gun which suspends enemies mid-air, an exploding disc slinger and a shield. Frustratingly, your units can become pretty easily overrun if you aren't paying attention, so these tools will be key to campaign survival.

Across the map there are several circular base nodes you can build on. Expanding your foothold across the



Sigh, yet another entry in the first-person virtual reality real-time strategy genre.

the user interface design is among the best I've seen in a VR title to date

WHY SHOULD I CARE?

+ You prefer to see strategy first person

+ You like your wars colourful

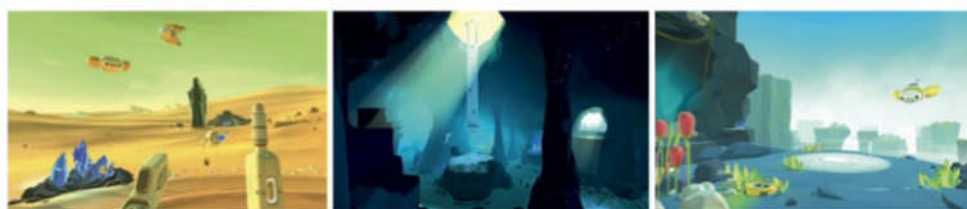
+ You like being the carer to your minions

map quickly is a must. My first game saw me really hunker down and build out my base for a long time, only to deplete the local crystal mine and spend the rest of the game fruitlessly fighting off increasingly vicious waves of enemies, who had steadily whittled down my squad of attack bots and established an unbreakable hold on the next-closest base node.

Though recently out of early access it still suffers from a couple of bugs. As waves of approaching enemies intensified I noticed some of my robot minions stuck shooting into solid rock, inside which an enemy snake alien had spawned. Another enemy was simply invisible, freely hurling blobs of acid at my units that were helpless to respond.

Being face to face with the action is a trade-off for less oversight across the world. There is an overview map that can be summoned by pulling the grip buttons, and selecting and ordering units this way is simple enough, but still complicates what would traditionally have been a simple glance to the bottom corner of your screen.

With decent-sized map and a combination of strategic and more mellow nodes to build on there's quite a game to be played here. That said, I found myself spending too much time playing caretaker to my units. Patient strategy fans looking for a VR outlet may find Cosmic Trip a fresh and challenging experience. **MICHAEL JENKIN**



VERDICT:

A fresh take on an age old formula, beautifully crafted for its VR approach, but the labour required detracts a bit from the fun.

6

Impact Winter

The Winter of our discontent

DEVELOPER MOJO BONES
PUBLISHER BANDAI NAMCO
PRICE \$19.99
AVAILABLE AT STEAM
impact-winter.com/en

There is a good game at the heart of Impact Winter, a survival adventure game that sees players trying to find other survivors and live until rescue arrives after an asteroid strikes the Earth and leaves it in a state of permanent winter. Unfortunately this chewy nougat centre is coated in a layer of strange decisions so thick that the goodness has a hard time shining through. The problems start with the menu screen if you're a keyboard and mouse user. There are no mouse controls, and the key for starting the game is E, and unless you got a special PR boxed copy, you've no way to find that out other than through trial and error. Once you get into the game, the mouse stays absent and half of the on-screen prompts give a controller input rather than anything to do with the default PC control scheme. Half of the prompts are for PC controls even when you use a controller - how can a developer manage to screw up on screen prompts for both schemes?

It's strange that such a fundamental misstep made it through the design process, given that UK developer Mojo Bones has experience making games and Namco Bandai is the publisher and distributor of the game. It's doubly strange given how solid the concept and execution of the rest of the game is. Players take the role of Jacob, the leader of a group of survivors. Jacob is a Jack of all trades in charge of a group of specialists. Christophe is a tech guru, Wendy is a cook, Blane is a survival expert and Maggie is a mechanic. Each of these skills is essential for survival. Wendy helps you craft nourishing meals and if you



C'mon Tavish, the winter of our downloadable content is a better gag, surely?

There are no mouse controls and the key for starting the game is E

WHY SHOULD I CARE?

- + You want to survive the apocalypse
- + You are a rugged survivalist
- + You like having to figure out controls for yourself

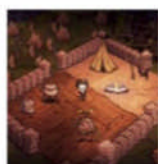
can find the right ingredients, create meals that keep up the team's morale. Maggie can craft more efficient resources and upgrade the church that serves as your shelter. Blane can craft traps to hunt game. Christophe can help upgrade Ako-Light, a flying robot drone that is essential for completing missions within the game. Your ultimate job is to keep this group alive for 30 days. That's when rescue is meant to arrive.

Rationing food, hunting, finding supplies and the like play a core component in Impact Winter, but it's not the be all and end all of gameplay. There is a good degree of resource management and This War of Mine style survival decision making, but on

top of that there is an RPG like layer that sees Jacob exploring and finishing quests to reduce the amount of time it takes for your rescuers to arrive. Some of these quests are given by the survivors in the base and others are given by characters or events encountered in the world.

Impact Winter is a good game but in its current state it's essentially broken. The keyboard controls are awful and the controller doesn't fare a great deal better with some bizarre input lag. Mojo Bones is currently working on a patch to fix, or at least improve the controls. It may be out by the time you read this review. Check the Steam page. If the controls are fixed, give it a shot. **TAVISH FORREST** PC

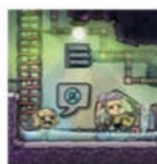
OR TRY THIS:



DON'T STARVE
KLEI ENTERTAINMENT, 2014
▲ Amazing survival sim
▼ Solo survival



THIS WAR OF MINE
11 BIT STUDIOS, 2014
▲ Heartbreaking survival
▼ Depressing



OXYGEN NOT INCLUDED
KLEI ENTERTAINMENT, 2017
▲ Don't Starve on the moon
▼ Early access

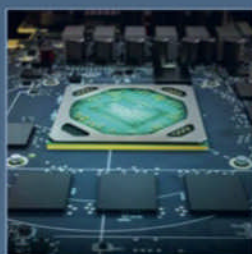
VERDICT:

With some serious control patching, Impact Winter will be great. As it stands, it's almost unplayable.

6

Tech²⁶³

YOUR GUIDE TO PC GAMING HARDWARE



Overpromise, and under-deliver.

*Not our mantra

It's a common problem when it comes to new gadgets in the PC hardware field. Intel made some extreme claims about Optane when they first announced it, with talk of 1000% speed increases. It turns out that the end result doesn't quite match the hyperbole... but it does deliver real benefits in very specific hardware scenarios. You can read more about it in our Optane feature.

AMD has also just released a refresh of its RX400 series of cards, and we managed to get our hands on the top two models. As you'll see, once again it's more of a marketing ploy than any meaningful performance increase, but we've just received their low-end RX500 series a day before going to press. We'll be presenting their performance in PCPP's Annual Tech Special, where we've benchmarked basically every GPU on the market – hopefully the RX550 and RX560 do deliver on the promises of better performance at the entry-level of the market.

Just two days after I'm writing this, the PCPP crew are headed to Taipei for Computex. Think four days of back to back 30 minute meetings with the biggest hardware companies on the planet to check out what they've got in store for the year. Last year was a bit of a fizzer, but this year is looking very different – with AMD's Ryzen CPU launch there's going to be a motherlode of motherboards, as well as hopefully some info on their new high end Vega graphics chipset. Meanwhile there are plenty of rumours of Intel launching a new chipset, so hopefully we'll see more than just a few old products prettied up with RGB lighting. Check in to the next issue of PCPP to see a full, detailed report – if we make it back in one piece.

Bennett Ring
Tech Editor



Our Power Award is given to products that are best in class no matter your budget.



Our Smart Buy Award goes to products that balance performance with price tag.

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- 87** BlasterX Kratos S5
- 88** Hotware
- 90** Inventory

THE PCPP TESTBENCH

CPU
INTEL I7 3770K
intel.com.au



MOBO
GIGABYTE Z77X-UD3H
gigabyte.com.au



SSD
CORSAIR NEUTRON
corsair.com



RAM
8GB PATRIOT DDR3 2,133MHz
patriotmemory.com



GPU
RADEON HD 7970
amd.com



PSU
CORSAIR AX860I
corsair.com



DISPLAY
DELL U2711
www.dell.com.au





NETWORKING

Netgear S8000 Switch

The world's first QoS switch

PRICE \$149

www.netgear.com

One of the most boring networking components we can think of is the humble switch. Designed to split a single Ethernet connection into many, they're usually not equipped with any smarts at all other than basic traffic management, unless you're talking about Enterprise-grade switches. The S8000 changes all that, bringing a raft of advanced features to the consumer-level.

It's an eight port switch, so once you've plugged your input cable in, there's room for seven more Ethernet devices. Netgear has gone for a very aggressive design, totally unlike the beige boxes we're accustomed to with other switches, and mimicking some of its gamer-focused router designs. It's rather heavy as well, with the entire chassis built from metal instead of the plastic usually used.

Before we delve into the features, we should probably explain what Quality of Service (QoS) actually means. It basically takes the traffic going to all of the different devices and prioritises which device gets the most bandwidth based on what it's doing – gaming usually gets #1 priority, followed by video streaming. Considering many gaming-grade routers already have QoS built-in, you may find that you don't really need the S8000, unless you're running more Ethernet

cables than your router can handle.

Logging into the S8000's web-based interface reveals a series of different screens that allow the user to configure it to their liking. If you want to keep things simple, plug your gaming device into port 1 and your media streaming device into port 2, and the S8000 will automatically prioritise their traffic. However, it's possible to manually set each port's priority. There's also a range of preset modes, along with a bunch



of features that most home network novices won't have a clue about.

For example, this device supports link aggregation, which means you can link up to 4 ports together to deliver 4Gbps of bandwidth to another device, provided that device also supports Link aggregation. However, we doubt most users would know what "IGMP Snooping" or "Validate IGMPv3 IP Header" in relation to multicasting means.

We do like the diagnostics screen,

Netgear has gone for a very aggressive design, mimicking some of its gamer-focused router designs

which shows if you have issues with any of the ports or the cables connected to them, but overall we think Netgear could have supplied a little more help text with some of the settings to make this an easier device to use.

Considering it's possible to buy a basic 8-port switch for around \$35, the \$149 price tag on the S8000 is also rather hard to swallow. However, if you have an abundance of Ethernet connected devices to your house and are having issues with your bandwidth being distributed to the wrong machines, the S8000 could be just the switch you need. **BENNETT RING PC**

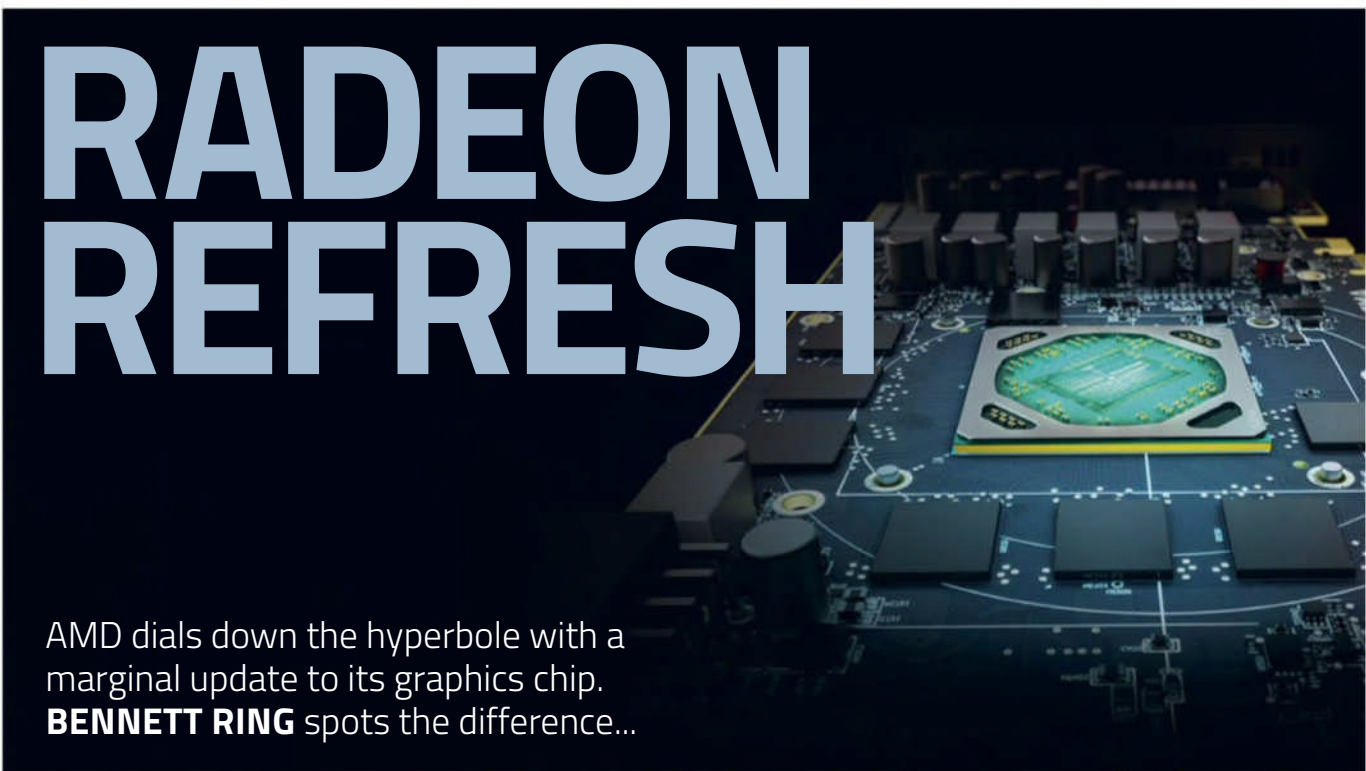
- Supports Link Aggregation
- Allows for manual prioritisation
- Expensive
- Slightly complex GUI for network novices

VERDICT:

This is a very unique product, only useful for those with extremely fast Internet connections that they need to share to a wide range of Ethernet devices.



RADEON REFRESH



AMD dials down the hyperbole with a marginal update to its graphics chip. **BENNETT RING** spots the difference...

While we wait with bated breath for AMD's new high-end GPU, the Vega series, which promises to rival Nvidia's GTX 1080 Ti, we've been fed another annual refresh of their existing products. Last year AMD launched the RX4XX series to much fanfare, promising VR-ready performance at a price point that would make VR a whole lot less expensive. We covered the brand-new GPU in detail when it released in June of last year, based on the new Polaris architecture, and AMD has given it a fresh lick of paint to offer a slightly improved version of the product this year. Welcome to the Radeon RX5XX series, but don't get too excited – not a whole lot has changed in the last twelve months.

With the new Vega architecture slated to target high-end gamers, the RX5XX range is aiming at the mid-range market. As such, prices range from \$140 to \$400, taking on the likes of Nvidia's GeForce GTX 1060, but well below the \$550 price of the GeForce GTX 1070. It was rather obvious AMD weren't making too much of a fuss about these new series of cards when the first we heard of it via press releases by third-party product manufacturers, with no official information from AMD itself. When you're launching a brand-new product range, it feels a little odd not to have a press release to accompany it, so it's obvious that AMD aren't hugely promoting this product refresh. So, just what have they done to turn the RX4XX series into the RX5XX series?

THE BUDGET BATTLER – RX550

There will eventually be four new products in the RX5XX series lineup, but we were only able to get our hands on two of these. At the very lowest end is the RX550, and this is arguably the most interesting card of the lot. Priced at around \$140, it's the most affordable of the range. This is based on AMD's new Polaris 12 GPU, a very power efficient, entry-level performance card, that is built around 8 Compute Units (CUs), yet features a 128-bit memory bus. It's got half the CUs of the Polaris 11 design, and is built from 2.2 billion transistors. Like all of the new cards, these transistors are built using what AMD likes to call the 'Latest Generation FinFET 14" process'. In other words, it's the same 14nm process as last year, but 12 months of refinements have allowed them to reach higher yields, better power efficiency and higher clock speeds. It seems the Polaris 12 GPU is designed first and foremost for

■ ■ AMD's improved manufacturing process has allowed them to eke out a little more performance ■ ■

laptops, though it has shown up in discrete desktop cards; it's just a shame we weren't sent one, as it would be very interesting to see how it competes with Nvidia's GeForce GTX 1050, which is very similarly priced. With only 2GB of onboard GDDR5 memory it's not designed for anything higher than 1080p gaming, and we'll endeavour to get our hands on one asap.

NEXT IN THE LINE

Next up we have the RX560, which is a rather different proposition to the two cards we did manage to get our hands on. When it came to the RX4XX series, AMD never shipped a Polaris 11 GPU with every single CU enabled, except in certain laptops. Enter the RX560, which has the full 16 CUs enabled, finally giving desktop users the full use of this GPU. Compared to its predecessor, the RX460, it's not just the two extra CUs that give it an advantage. The Texture Units have been increased to 64 (up from 56 – part of the CU configuration), while the Boost Clock now peaks at 1275MHz instead of 1200MHz. In all other regards it's pretty much identical though, with a 128-bit memory bus and 4GBV of 7Gbps GDDR5. However, due to the frequency increase, AMD has had to pump a little more power through the GPU, increasing the TDP up to 80W compared to 75W of its baby brother – not a large jump by any means... unlike the next two cards in the stack.

THE MAIN CONTENDERS.

The two cards we were sent are basically identical to last year's cards, but with frequency increases. Both the RX570 and RX580 are the same as last year's RX470 and RX480, but AMD's improved manufacturing process has allowed them to eke out a little more performance. Both are based on the Polaris 10 architecture, but have been given more juice to increase their clock speeds. However, there is one difference AMD is pushing – a refinement in their memory technology.

In the past, if multi-monitors were in use, the card would use full power to the memory, but the new cards allow for a new mid-range power setting of 4Gbps. It also does so when playing back high-bitrate H.264 and HEVC videos, dropping to 4Gbps of bandwidth whereas the former cards were locked at 8Gbps when playing these high-res codecs. The result is a 30% saving in power to the memory modules, which isn't insignificant in mobile variants of these chipsets.

Let's look at the RX570 first. It has the same 32 CUs of the RX470, which means it has identical texture units and ROPs (128 and 32 respectively). However, both the base clock and Boost clock have been given an increase. The base speed of the RX470 has increased from 926MHz to a whopping 1168MHz, which is a 26% increase. While that sounds freaking fantastic, it's worth bearing in mind that base clock speeds are pretty much irrelevant for gamers, as our GPUs tend to run at Boost speed while gaming. In that regard, the Boost speed improvements are nowhere near as



▲ Aorus RX470 4GB

impressive. While the RX470 had a maximum Boost speed of 1206MHz, the 570 increases this to just 1244MHz, a mere 3% increase. Memory speed has increased slightly as well, up from 6.6Gbps to 7Gbps, a decent 6% increase. We should point out that our Aorus sample increases this to 1295MHz in OC mode, and to 1280MHz in gaming mode, the latter of which we tested with. We wanted to test the chipset, not the card, but we can expect most other manufacturers to offer decent factory overlocks as a result of the refined manufacturing process.

That extra frequency doesn't come from nowhere though, with AMD having to pump more power through the cards. As a result the new RX570 draws 150W of power, compared to the 120W of its predecessor. In all other regards, the cards are identical, with 4GB of memory, a 256-bit memory bus, and 5.7 billion transistors. Considering it's now possible to pick up an RX470 card for \$269 compared to the \$289 for the RX570, the price difference is minimal, so you may as well suck up that \$20 for the slightly improved performance.

THE BIG MAN ON THE BLOCK

Finally we come to the top-end of AMD's new mainstream cards, the RX580, which we were able to benchmark against the prior generation. At \$399 for the Aorus RX580 8GB we were sent, it's still not a huge price hike over existing 8GB RX480 cards, which go for basically the same price.

In return for this zero-price difference, you get a card that is basically identical to the RX480 but with some frequency boosts. The base clock jumps from 1120MHz in the RX480 to 1257MHz in the RX580, a generous 12% leap, but what we really care about is the Boost speed increase. In this case the difference isn't quite as large, but still decent nonetheless. The RX480 has a Boost frequency of 1266MHz, which has been increased to 1340MHz in the RX580. Our review sample, the Aorus RX580GB bumps this up even more, to 1439MHz in OC mode, and 1425 in gaming mode – again, we used the gaming mode for testing to see how the new cards will function, not heavily

/// NVIDIA really has stolen AMD's thunder in the mid-range, and even a frequency boost hasn't been enough to cover the gap ///



▲ Aorus RX580 8GB

overclocked versions of them. While our card came with 8GB of memory, 4GB versions will also be available, starting at a retail price of around \$335. Given how memory hungry the Polaris 10 architecture is, we'd suggest going for the 8GB version.

Once again, that performance increase doesn't come for free – AMD has had to pay the power piper to do so. The RX480 had a power consumption of 150W, but this has increased to 185W in the new RX 580. The memory speeds between both cards are identical, with the 8Gbps version running at 8Gbps over a 256-bit bus.

TESTING TIMES

Now, onto the testing. Unfortunately we didn't have an RX480 here, so instead tested the new cards against a range of comparable cards.

Using our new benchmark suite, we were





▲ Sapphire RX470 8GB



▲ Gigabyte G1 Gaming GeForce GTX 1060

less than impressed at the results. As our RX570 was only a 4GB version, we benched it against both a 4GB and 8GB RX470. As you can see, it lost out to the 8GB RX470 in every test, though the older card is \$30 more expensive due to that extra 4GB of memory. And when you compare the results against the much more affordable Gigabyte GeForce GTX 1060, things go from bad to worse.

The Nvidia card took out the top spot in every test bar 3DMark, and often by quite a healthy margin. Considering it's 25% cheaper than the Aorus RX580 8GB card, there's simply no reason to even consider the Aorus RX580 8GB.

BRING ON VEGAS

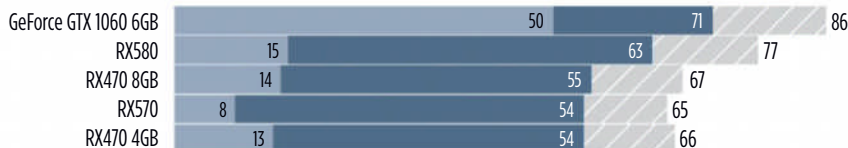
It appears that Nvidia really has stolen AMD's thunder in the mid-range with its GeForce GTX 1060, and even a frequency boost from AMD hasn't been enough to cover the gap. As it stands, there's simply no way we could recommend the new RX5XX series over the GeForce GTX 1060. Here's hoping that AMD's Vega lives up to all the hype, which we'll know soon enough with Computex just around the corner. By the way, we'll have full coverage of both the RX550 and RX560 in PC PowerPlay's upcoming Tech Special, where we have tested every major GPU on the market – keep your eyes peeled! **PC**

RX Series Benchmarks

■ Avg FPS ■ Min FPS ■ Overall Average ■ Score ■ Score

RISE OF THE TOMB RAIDER

GEO THERMAL VALLEY (HIGHEST DETAIL, 1080P, PUREHAIR DISABLED)



TOTAL WAR: WARHAMMER

ULTRA DETAIL, 3840 X 2160



GHOST RECON : WILDLANDS

ULTRA DETAIL, 1080P



3DMARK Fire Strike

1920 X 1080



3DMARK Fire Strike Extreme

2560 X 1440



PRICE COMPARISON

Aorus RX580 8GB	\$399
Sapphire RX470 8GB	\$325
Gigabyte G1 Gaming GeForce GTX 1060	\$315
Aorus RX570 4GB	\$295
Gigabyte GeForce GTX 1050 Ti	\$215

OPTANE EXPLAINED

BENNETT RING got more than he bargained for when testing Intel's newest memory tech

New PC technologies are generally wonderful times for us geeks. We get entirely new toys to play with which deliver real benefits to our computing experience – usually faster performance, better visuals, richer sound and a myriad of other wonders. Unfortunately they often come with a flipside – bugs and complicated installation methods. Not to mention sometimes they're just marketing launches, and don't really deliver on their promises. We can say without doubt that Intel's new range of Optane product is definitely one of the most complicated devices to install we've ever seen. But does it deliver on the performance increase promise? Before we look at how Optane performs, let's explain what it actually is, as there is a huge amount of confusion about what it actually does.

3D XPOINT NON-VOLATILE MEMORY

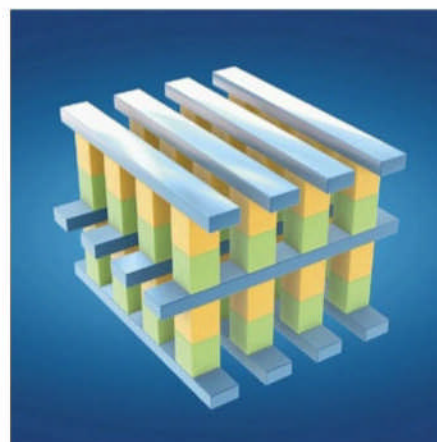
Optane is based on a brand new memory type that is rather different to the flash-based memory we see in other SSDs. Announced by Intel and Micron in 2015, it's intended to deliver extremely high performance at a price lower than normal RAM, but higher than flash memory. Intel has demonstrated that it's around three times faster than the best flash memory on the market, and intends it to be used in two ways. Firstly, in rather costly SSDs, and secondly as a cache to speed up your existing drives. In the second usage case scenario it's basically like those Hybrid-

mechanical drives that failed to take off over the last few years, which used 64GB or so of Flash memory as a cache to speed up the mechanical drive. However, Intel's Optane Cache drive is attached to your motherboard via the M.2 slot, and not to the hard drive itself.

The memory is seen as a next-generation memory technology, designed to take over when today's NAND memory can't scale in density and cost-per-bit any further. While the following is a little technical, it's worth pointing out. One of 3D XPoints major benefits is that it can read at the bit or word level, whereas today's NAND drives have to read at the 4K page level. This makes it better at workloads that don't require a lot of parallelism. The greatest performance improvements will come when used in tandem with a mechanical drive, but as you'll see it can even improve the performance of today's SSDs.

Unfortunately, due to the newness of this exotic memory type, prices are likely to remain

■ One of the biggest limitations with Optane is the list of requirements that must be met for it to work ■

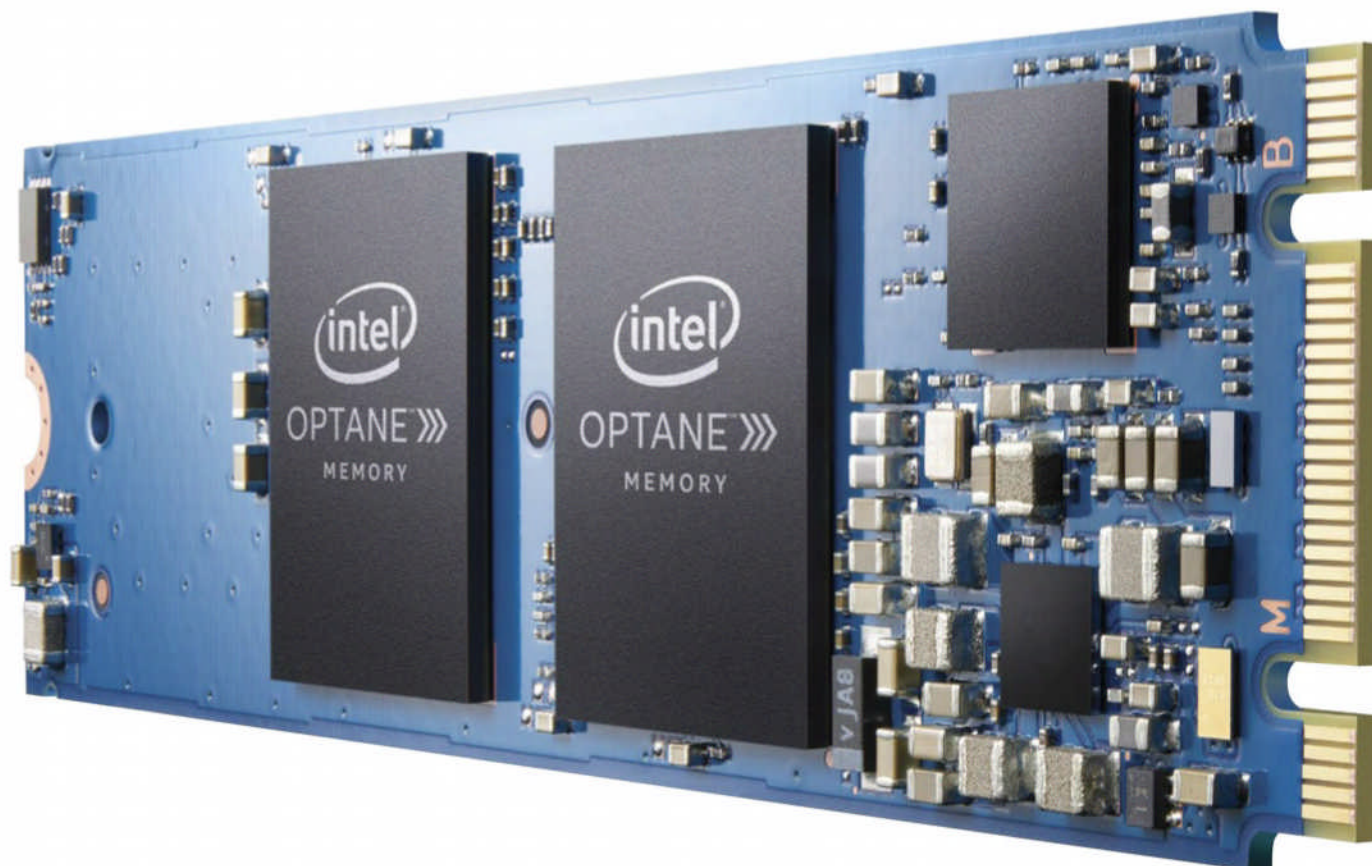


▲ One for the Jenga perfectionists.

high for at least a year or two, which makes it prohibitively expensive to build full SSDs from it. This is why the product that Intel sent us was the Intel Optane Memory M.2 NVMe SSD, and not the Intel Optane SSD DC P4800X drive. Despite being only 375GB in capacity, this larger SSD is currently retailing in Australia for \$2400, showing just how expensive the memory within is. On the other hand, the M.2 NVMe SSD is just \$79 for the 16GB version, and \$129 for the 32GB version.

OPTANE REQUIREMENTS

One of the biggest limitations with Optane as an M.2 cache is the list of requirements that must be met for it to work, and which is why



we wasted an entire day trying to get it to work. Firstly, your motherboard must be an Intel 200 series board that is compatible with Optane. This is why we chose our usual test-bench to test out the Optane, the ASRock Fatal1ty Z270 Gaming K7. Also, the M.2 slot that it fits into must be an M.2 type 2280 connector with either x2 or x4 PCIe lanes, that supports the NVMe 1.1 spec. The motherboard's BIOS must also support Intel Rapid Storage Technology version 15.5 or later. So far, so good.

Secondly, the Optane cache can only be used on your primary hard drive that houses your OS. Considering many gamers will use a 128/256GB for their OS install, and then a 1TB or 2TB for their gaming library, this is a bit of a bummer. During the installation of the Optane M.2 cache, the specific serial number is tied to the boot drive. So if your boot drive goes kaput, you'll need to reassociate and re-configure the Optane software.

When it comes to OS support, there's only a single OS that currently works with the cache device – Windows 10 64-bit.

Finally, here's the kicker that kept us stumped for a full day, as there was no mention of this included in the 33-page manual that comes with the review kit. It was only after reaching out to ASRock that we found out why our Optane cache simply was not being detected by the Intel Optane system, even after we'd changed the SATA mode to the correct Intel Optane acceleration mode. With our board,

it turns out that it only works with drives that have been formatted in GPT partition mode... which basically nobody ever does, as MBR is the default method. As a result, installing the Optane M.2 cache meant we had to do a full Windows reinstall, and we lost all our data in the process, as changing the partition mode wipes all of your existing data. Sigh. This is our biggest issue with the Optane M.2 Cache SSD – it's not prominently mentioned anywhere about this being an issue on certain motherboards.

THE PRODUCTS

Even though we weren't sent one to review, we'd like to touch on the new Optane SSD DC P4800X 375GB, as online results have shown this is one amazing piece of hardware. It's equipped with a brand new controller designed specifically to take advantage of the 3D XPoint memory. It's equipped via a PCIe 3.0 x4 NVMe slot, and is currently only available in 375GB size, with 750GB and 1.5TB capacities due later in the year; we dread to think how expensive the other versions are considering the smallest is \$2400.

Quoted performance numbers are simply off the chart. Random 4kB read IOPs is 550,000, writes of the same is 500,000. While there are existing SSDs on the market that hit these numbers, they require very high queue depths to do so. The P4800X does not, which should equate to much faster real world performance.

One benefit of the new memory type is that

▲ Bennett wiped his hard drive to get this feature done. What a champ.



it's slightly more durable than today's NAND memory. This is why Intel has delivered a 3-year warranty, with up to 30 full drive writes per day, though it claims it should be able to handle this load for a full five years.

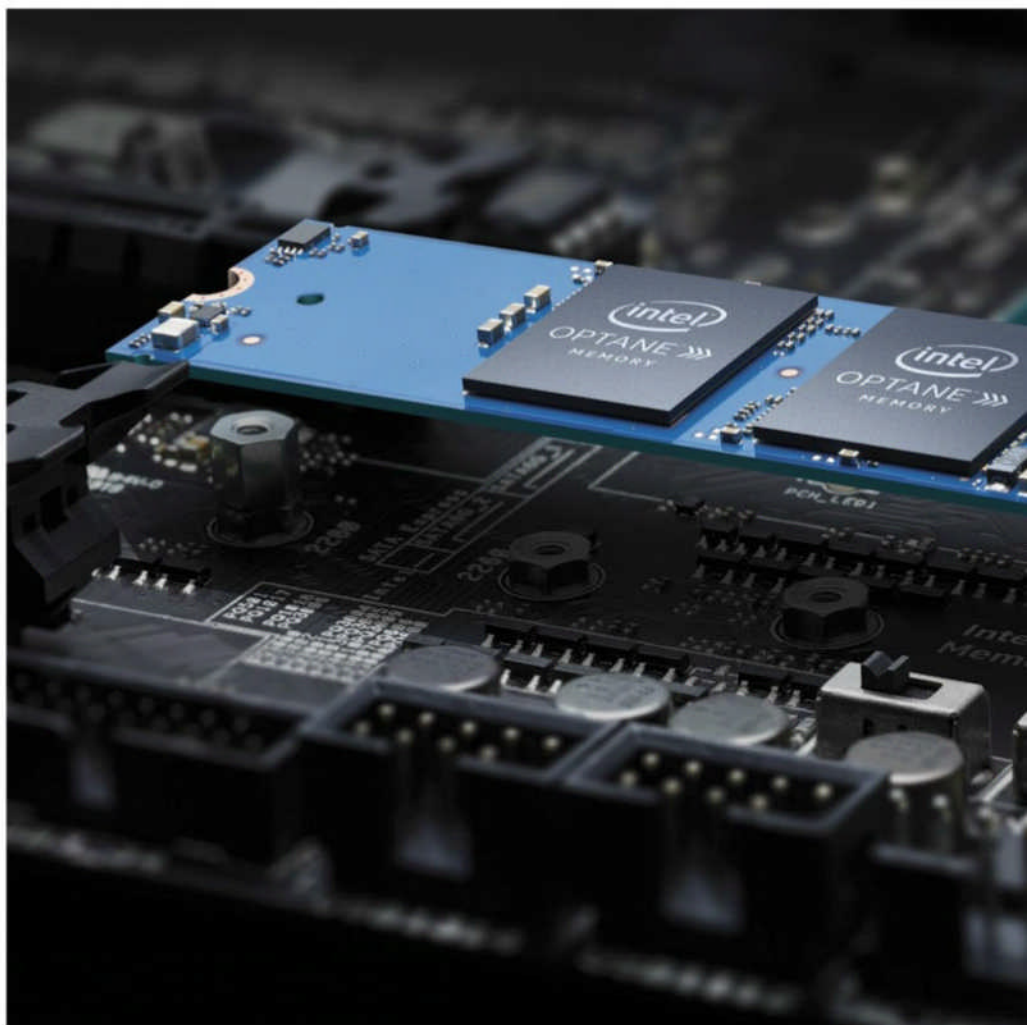
Online tests show that this drive is between four and ten times faster than Intel's Intel SSD DC P3700. It's also much better for latency sensitive applications, but for the time being it's really limited to a very certain demographic. Now, onto the drive we actually have, the Intel Optane Memory M.2 NVMe SSD.

CACHING THAT FINALLY WORKS

We received the 32GB model, which retails for \$129 and is already widely available. As mentioned, it is primarily designed to cache your OS drive, but it can be used as a dedicated SSD if you so desire, though we doubt 32GB is big enough for most people to bother.

The form-factor of the card is a standard 22x88mm used by most M.2 drives, though it only requires twin PCIe 3.0 lanes. Despite the length of the card, the components on top are tiny, likely as there's so little memory, so we can envisage even smaller versions in the future. Both memory modules are covered by copper foil to act as a heat spreader.

Intel claims the drive can handle 1350MB/sec sequential read, 290MB/sec sequential write, 240K random read IOPs and 65K random write IOPs. These aren't especially impressive, which is why Intel is really pushing the latency figures for this drive. Read latency is 9 μ s while write latency is just 30 μ s, which is an order of

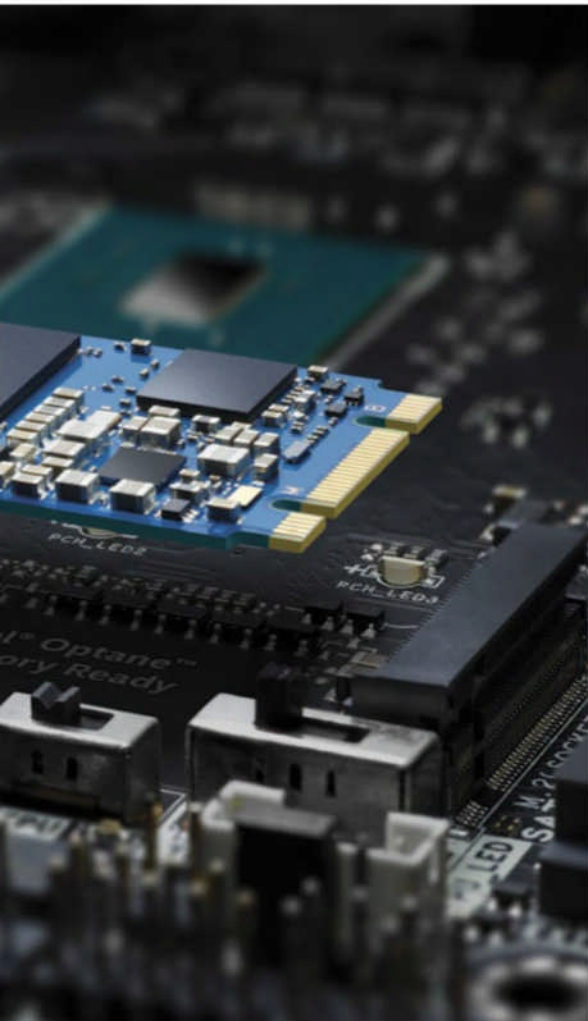


■ We've been sceptical of hybrid drives, but Optane really does seem to help when it comes to mechanical drives ■

magnitude over other SSDs. Other NVMe drives can rival these numbers, but this is because they aren't performing them immediately – they've already queued up the data. The drive is rated to handle 100GB of data writing per day for a period of five years.

As we mentioned, setting up this drive proved to be a major issue. After changing the SATA mode selection to "Intel RST Premium with Intel Optane System Acceleration (RAID Mode)" our system failed to detect the Optane drive when installing the necessary software. As a result we had to reformat our boot drive to GPT mode after chatting to ASRock, and then performing a full Windows reinstall. We first tried a Windows reset, but the machine failed to boot after that. So we'd

◀ To avoid Bennett's fate, check with your motherboard vendor before installation.



check with your motherboard vendor first that you'll be able to install this product without having to do a full OS reinstall; it appears not all boards suffer this issue.

We tested our sample with both a SanDisk SSD and Seagate Ironwolf Mechanical HDD. As expected, the benchmarks for the Mechanical drive were much more impressive. As you can see, it never quite matched the performance of the SSD, but Optane did dramatically lower boot times. However, when it came to pairing it with an SSD, the performance improvement was much, much lower.

We've been very sceptical of previous hybrid drives, as their performance never seemed to match the claims being made, but the Intel Optane Memory M.2 NVMe SSD really does seem to help when it comes to mechanical drives. However, we have to question whether it's worth the various upgrades you'll like need to have (ie a Series 200 motherboard, 7th Gen Core CPU and a full OS reinstall) compared to buying a standard 256GB or 512GB hard drive. If you do have all the necessary goodies, and do need to speed up your old mechanical drive, Optane is a viable option – just bear in mind the many hoops you'll need to jump through. 

Optane Benchmarks

Time in seconds

WINDOWS BOOT TIME SSD

SCORE TIME (SECONDS - LOWER IS BETTER)



WINDOWS BOOT TIME MECHANICAL HDD

SCORE TIME (SECONDS - LOWER IS BETTER)



GHOST RECON WILDLANDS BOOT TIME SSD

SCORE TIME (SECONDS - LOWER IS BETTER)



GHOST RECON WILDLANDS BOOT TIME MECHANICAL HDD

SCORE TIME (SECONDS - LOWER IS BETTER)



TOTAL WAR: WARHAMMER BOOT TIME SSD

SCORE TIME (SECONDS - LOWER IS BETTER)



TOTAL WAR: WARHAMMER BOOT TIME MECHANICAL HDD

SCORE TIME (SECONDS - LOWER IS BETTER)



RISE OF THE TOMB RAIDER BOOT TIME SSD

SCORE TIME (SECONDS - LOWER IS BETTER)



RISE OF THE TOMB RAIDER BOOT TIME MECHANICAL HDD

SCORE TIME (SECONDS - LOWER IS BETTER)





Laptop Benchmarks

■ Min FPS ■ Avg FPS ■ Overall Avg

RISE OF THE TOMB RAIDER

GEOHERMAL VALLEY (HIGHEST DETAIL, 1080P, PUREHAIR DISABLED)

ASUS FX553	15	31	38
Aero 15	26	56	65

TOTAL WAR: WARHAMMER

ULTRA DETAIL, 3840 X 2160

ASUS FX553	26	32
Aero 15	26	30

GHOST RECON: WILDLANDS

ULTRA DETAIL, 1080P

ASUS FX553	14	18
Aero 15	30	35

LAPTOP

ASUS Gamer FX553

It's all about the GPU

PRICE \$1,999
www.asus.com.au

It's nice to see a company delivering a 15.6-inch laptop without focusing first and foremost on ultra-portability or how slim they can make the chassis. Asus has aimed to deliver a laptop here that is quite portable, yet has the gaming guts to allow a bit of LoL on the side. Unfortunately once again we see yet another company scrimping on the GPU to keep the price down, limiting this machine to very basic games.

At the heart of the issue is the Nvidia GeForce GTX 1050. To put it bluntly, unless you're playing very graphically basic games, this machine simply won't cut it. As our new suite of benchmarks show, the GeForce GTX 1050 just doesn't have the oomph to cut it with the latest and greatest. When you're hitting minimum framerates of 15fps in the likes of Ghost Recon: Wildlands or Rise of the Tomb Raider, it's obvious that maximum detail settings aren't going to be accomplished with this machine.

We have to wonder just what the price premium is on the mobile GTX 1050 versus the 1060, which would almost double gaming performance – on the desktop it's a mere \$100 in difference in price between the two. If the price difference is similar in the

mobile market, Asus is simply crazy not to equip this machine with a GTX 1060.

The rest of the specs are certainly respectable if all you're after is productivity use. Intel's darling of the day, the i7-7700HQ is a quad-cored chip that ramps all the way up to 3.8GHz, providing oodles of performance for non-3D applications. Another 16GB of



DDR4 memory means you can multitask with extremely snappy performance, while a main OS SSD helps back things up in this regard. The only problem is that it's a tiny 128GB in size; thank god Asus threw in a secondary 1TB mechanical drive for extra storage, as 128GB doesn't go far.

The 15.6-inch screen is relatively bright for a laptop at 200 Nits, which probably explains why the machine only lasted just over two hours in PCMark 8's

what you'll notice most is the relatively low power when it comes to gaming

accelerated battery test, which would equate to about six hours of real use.

At 2.5kg, this is no lightweight, so you will notice it if you're carrying it around all day. But what you'll notice most is the relatively low punching power when it comes to gaming. It seems odd to us to pair such a fast CPU with an entry-level GPU, so we're guessing NVIDIA is bumping up the price of the mobile GTX 1060 compared to the 1050 dramatically. It's a shame, as the rest of this laptop stands up well. For part-time, low-end gamers it'll do the job... but so will many other machines that are much lighter and easier to lug around.

BENNETT RING

- Great CPU and memory
- Speedy albeit small SSD
- Great screen image quality

- Woefully underpowered GPU
- Very average battery life

VERDICT:

If you're looking for a machine that is for office use first and foremost, with a dash of gaming on the side, you can do worse than this.

7

Laptop Benchmarks

Firestrike Score Extreme

3DMARK Firestrike

ASUS FX553	5457
Aero 15	9589

3DMARK Extreme

ULTRA DETAIL, 2560 X 1440

ASUS FX553	2642
Aero 15	5048



LAPTOP

Gigabyte Aero 15

A touchy little laptop

PRICE \$2,899
www.gigabyte.com.au

You wouldn't pick it from the outside, but this is a gaming laptop in a business suit disguise. Gigabyte has chosen to use a chassis that wouldn't look out of place on a CEO's desk, but packs plenty of gaming grunt within. As a result it's not exactly super portable for a 15.6-inch machine, weighing 2.1kg, though Gigabyte has managed to make this screen fit into the footprint of a 14-inch machine.

This is thanks to the super thin bezel around the screen, which is just a few millimetres thick. It's a standard HD 1920 x 1080 IPS panel; at this price we'd have expected something a little higher resolution. Due to the small dimensions the pixel structure isn't apparent though, and it's got full X-Rite Pantone certification, ensuring perfect colour accuracy for image professionals.

The chassis is built entirely from aluminium, and each key has quite a large amount of travel. However, they do require a little extra force to activate than we're accustomed to, but the real problem child is the touch pad – it's atrocious. Occasionally it would work fine, but for the vast majority of the time it'd be wildly inaccurate. It was also iffy about supporting standard Windows gestures, such as flicking with two

fingers to scroll the active window – sometimes it would work, other times not at all. Gigabyte really needs to swap out the touch pad being used here.

Gigabyte has equipped the Aero 15 with a wide range of connection options. On the right side are twin USB 3.0 Type A along with a single USB 3.1/Thunderbolt 3 Type-C connection – we love the inclusion of Thunderbolt 3 as it allows for a huge variety of devices to be connected. There's also an SD card reader on this side. Heading to the other side reveals a single USB 3.0 Type A connection, along with Ethernet, HDMI 2.0, Mini Display-Port and a combo headphone/mic 3.5mm minijack.

The specs under the hood are just as impressive. Yet again we see Intel's i7-7700HQ in use, which has four cores that hit 3.8GHz under load. Samsung's 512GB NVMe M.2 drive provides a healthy amount of storage space at rocket speeds, while 16GB of DDR4-2400MHz is more than enough. Finally we have Nvidia's GeForce GTX 1060, a rather capable mobile gaming GPU.

It might be priced a little high given the screen resolution and lack of second drive, but overall Gigabyte has delivered a powerful gaming machine that you can easily sneak into the office as a boring

■ Gigabyte has managed to make this 15.6-inch screen fit into a 14-inch footprint ■

productivity focused model. We only wish the keyboard and touchpad weren't so bad, especially the latter. You'll definitely want to buy a mouse if you go for this machine. **BENNETT RING PC**



- Speedy performance
- X-Rite Pantone certified screen
- Sturdy construction

- Terrible touchpad
- Stiff key response

VERDICT:

It might be a little pricey, but Gigabyte has delivered a powerful machine in a relatively small form factor.

8

MOTHERBOARD

MSI Mortar B350M

Miniature price and form factor for AM4

PRICE \$139
www.msi.com

AMD's Ryzen has certainly caused a splash in the component market. With over 80 new motherboards on the way to support its new AM4 socket, we're starting to see more of them hitting our labs. The MSI Mortar B350M is the latest, and shows what great value a Ryzen platform can be.

At a mere \$139, it's possible to build a 10 core machine for less than \$1500 when combined with the R7 series. For the price, the Mortar comes packed with plenty of features, especially considering it's of the M-ATX form factor. There's full support for four memory modules with a top speed of 3200MHz, while twin full length PCIe x16 slots deliver CrossFire support. There's also twin PCIe x1 form factor lanes between the two

larger ones, though one will be taken out of commission if you use a dual lane graphics card. Four SATA 3 slots are ready for your traditional drives, while a single M.2 slot will take your new high-speed M.2 drive, and it supports the latest NVMe standard.

For just \$139, you're getting a whole lot of motherboard for a tiny price. This is the perfect basis for a mini-Ryzen based machine, and comes highly recommended. **BENNETT RING** 



- Amazing value
- High memory support
- NVMe M.2 slot

- Only 4 SATA slots
- Rather average audio chipset

VERDICT:

This is the perfect basis for a mini-PC based on Ryzen, all on a tiny budget

9

VIDEO CAPTURE

Razer Ripsaw Capture Box

Outpaced by the competition

PRICE \$179
www.razerzone.com

Nobody could have predicted just how popular gameplay streaming would become, but the market is now awash with game stream capture devices. The Ripsaw is just one amongst many – does it have the goods to compete with the latest products?

This tiny box doesn't have as many ports as other rippers – there's HDMI in and out, component in, mic and auxiliary sound in, and USB for connecting to your PC. Thanks to the speedy USB connection, it can capture in full HD at 60fps with zero compression, but it can't handle 4K. Razer promises zero latency when playing games through this box, but we noticed an ever so slight amount of lag when playing Squad. Lowering the quality settings helped to reduce this, but most streamers favour 1080p these days. It's compatible with OBS, XSplit and Razer Cortex, and will also handle all of the current consoles.

When it initially launched, the price was over \$300, making it far too expensive compared to the competition. However, Razer has slashed the price, making it a far more enticing proposition. At this price it's one of the more affordable capture boxes on the market, and it does the job without a hitch. **BENNETT RING** 



- 1080p @ 60fps uncompressed
- Twin audio inputs
- Easy setup

- Tiny USB cord
- Slightly low audio record levels

VERDICT:

Now that Razer has dropped the price, this is one of the more competitive capture boxes for pro-streamers.

8



AUDIO

Creative BlasterX Kratos S5 RGB 2.1 speakers

MOARGB

PRICE \$209
au.creative.com

We thought we'd seen it all when it comes to RGB lighting after seeing a power supply and RAM with programmable lights, but that was far from the end of the RGB revolution. We've seen umpteen RGB lit headsets over the last few years, but the BlasterX Kratos S5 is definitely the first speaker set we've seen that features 16 million colours. As fed up as we are at things having RGBs added for no apparent reason, the implementation on these speakers is genuinely quite good and pared back, with an understated strip of LEDs towards the base of each of the satellite speakers. These can be programmed with the creative Aurora Reactive suite, set to be reactive to games and synced with the recently released Slege M04 mouse and Vanguard K08 keyboard. The fact that the price doesn't seem to have been jacked up by the addition of RGBs is a pleasant surprise as well.

Of course, all the lighting in the world can't make up for poor performance, but thankfully Creative still knows how to make a good set of speakers. The unit is made up of a single 6 1/2" subwoofer and two 4" satellites, connected to the PC via USB. In addition, the speakers come with a hefty, tactile control knob

that, with drivers installed, allows users to change the lighting, control volume and run through a number of preset EQs designed for gaming and movies. The presets worked well enough to pinpoint different parts of the audio register to make dialogue, explosions, footsteps or gunshots more prominent, but without the directionality that comes with a 5.1 setup or a good set of headphones the flat EQ server is best during gaming.

While the programmable lighting may be the first feature that Creative touts on the Kratos S5 product page, the most interesting aspect of these speakers is relegated to further down the page. The speakers are 24-bit/96khz, so offer higher audio fidelity than most other speakers on the market. The current standard for speakers is 16-bit (or less), so technically 24-bit sound is much more impressive. At least it is on paper. As human hearing is limited, much of the added fidelity that comes with 24-bit sound is inaudible or unnoticeable, but what the extra dynamic range does do is add extra wiggle room to sound, meaning that limited bandwidth is less likely to squash or truncate some frequencies leading to clearer sound ranges. Of course to fully appreciate the effect, this requires a 24-bit sound source, so

we've seen umpteen RGB headsets but this is the first speaker set we've seen that features 16 million colours

without that it's neither here nor there.

Even without the benefits of the extra audio headroom, the Kratos S5 is an excellent set of 2.1 speakers. The speaker and sub housings are made from nice, resonant wood and there is a certain richness to the sound that is associated with it. We did notice a slight bit of tininess at the top end of the scale at high volume, but other than that slight niggles the Kratos S5 speakers performed admirably across all ranges when playing games, watching movies or listening to music. **DANIEL WILKS**

- Excellent build quality
- Great sound
- 24-bit/96khz

- RGB
- 24-bit/96khz is questionably useful

VERDICT:

The Kratos S5 is a set of speakers that didn't need flashy lights to be impressive.

9

HOTWARE²⁶³

with Terrence Jarrad



01

01 Sailor Moon Phone

\$600 • Meitu

m.meitu.com

Based on the M8 "selfie phone", this Sailor Moon themed version has a 12MP front camera, a 21MP rear camera, 4GB RAM, and comes in at 5.2 inches. We'd love to tell you more, but is there really anything else you need to know? Oh okay, there's also a Sailor Moon themed selfie stick. Happy now?

POWERED UP: Fighting evil by moonlight, winning love by daylight, never running from a real fight, it's the phone themed Sailor Moon.

PLAYED OUT: How do we get one? HOW?!



02

02 Aliens Final Fight Sneakers

\$TBA • Reebok

www.reebok.com.au

Most of us will never get to drive a power loader, or be a xenomorph matriarch, so Reebok is kindly going to release these two Alien Stomper sneaker designs for our feet to experience what each of those things would be like.

POWERED UP: Choose to be the P5000 power loader, or the XX121 xenomorph. Better yet, get both and put on one of each and let your feet duke it out in the cargo bay of a space ship!

PLAYED OUT: Not coming out until July 18, and no word yet on quantity. The previous Alien Stomper shoes were extremely limited.



03

03 Masei Iron Man Helmet

\$264-398 • Urban Street Zone

urbanstreetzone.com

Okay the colours aren't there, but this limited edition Masei motorbike helmet is very Iron Man. A bit of paint would bring that right out.

POWERED UP: Full face flip up design (just like the REAL Iron Man!). Removable cheek pads to make it easy to keep the inside clean.

PLAYED OUT: At time of writing these were selling cheaply and may be gone by the time you read this! Hey, we can't do everything for you. US DOT safety certified, which is good, but without an approved certification sticker, you could be fined for wearing this while riding.



04



05

04 ETC Video Synthesiser

\$680 • Critter and Guitari

www.critterandguitari.com

Quick serious note to start before you visit the site and watch the video: EPILEPSY WARNING. Well, we're not doctors, but the patterns this thing generates are mostly uncomfortable to watch, so just in case...

POWERED UP: Plug in an audio feed, twiddle some knobs, and this thing will output 720p video of generated patterns based on any of a series of available modes.

PLAYED OUT: Critter and Guitari were so preoccupied with whether or not they could, they didn't stop to think if they should.

05 Snooz White Noise Machine

\$120 • Snooz

getsnooz.com

If you have trouble sleeping and little sounds inside and outside your bedroom tend to keep you from dropping off (traffic or street noise, snoring partner), you may benefit from a white noise generator.

POWERED UP: Unlike apps that loop audio, the Snooz has a fan that spins to generate white noise sounds from light fan to plane drone. It's controllable via remote app, and at 2.5 inches, is small enough to take travelling.

PLAYED OUT: Do you hate sleep or something?



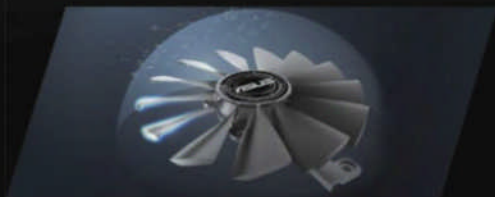
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ROG Strix RX 580

ROG Strix RX 570

Expedition RX 570

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gameplay streaming.

INVENTORY

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FOR EVERY BUDGET

CONTROLLERS

Even the PC master race needs control options

Xbox One Controller

\$89.95 microsoft.com/en-au/
Plug and play meets comfort. Every PC needs a controller and this is the best



Steam Controller

\$89.95 store.steampowered.com
There's a bit of a learning curve, but it's great for couch gaming



MODEM ROUTERS

For all rational budgets

BUDGET

TP-Link VR600

\$179 tp-link.com
Not the fastest, but it's stable, well priced and feature packed. ADSL modem built in



Synology Router RT1900ac

\$199 synology.com
No built in ADSL modem, but it's fast and has the best interface around



PREMIUM

NETGEAR R8000 Nighthawk X6 Tri-Band WiFi Router

\$300 netgear.com.au
Formerly our pick for the Beast, this router is more than powerful and fast enough for all your gaming needs



LAPTOPS

Gaming on the go

BUDGET

Gigabyte P55W v5

\$2099 gigabyte.com.au
If you want real gaming performance in a laptop, \$2k is where it starts



PREMIUM

Metabox Prime-X

\$6899 metabox.com.au
The fastest laptop around costs big



MINI

For lounge room gaming and streaming

CPU + COOLING

Intel Core i5 7500 w/ stock cooler

\$254 intel.com



MOBO

ASRock Z270M-ITX/AC Motherboard

\$200 asrock.com.au



GPU

Asus DUAL-RX480-4G

\$338 asus.com.au



MEMORY

16GB DDR4 Corsair Vengeance LPX Low Profiles

\$185 corsair.com/en-au



STORAGE

Samsung SSD M.2 2280 NVMe 250G 960 EVO + 2TB HDD (any)

\$178 + \$50 samsung.com/au



CASE

Fractal Design Define S Nano

\$115 fractal-design.com



PSU

SilverStone SFX Gold 500W SX500-LG

\$110 silverstone.com



SOUND

Your sound system What you paid for it



DISPLAY

Your TV What you paid for it



KEYBOARD

Roccat Sova

\$299 www.roccat.org



MOUSE

Roccat Kone EMP

\$99 www.roccat.org



TOTAL: \$1833

BUDGET

The perfect entry-level gaming PC

CPU + COOLING

Intel Core i5 7500 w/ stock cooler

\$254 intel.com



MOBO

ASRock B250 Gaming K4 Motherboard

\$150 asrock.com.au



GPU

Gigabyte RX480G1-GAMING-4GD

\$279 gigabyte.com.au



MEMORY

G.Skill Ripjaws 4 DDR4 2400MHz 16GB Kit 2x 8GB

\$135 gskill.com



STORAGE

2TB HDD (any)

\$50 www.staticice.com.au



CASE

Corsair Carbide SPEC-02 Mid Tower Gaming Case

\$70 corsair.com/en-au



PSU

SilverStone Strider Essential 500W ST50F-ESB

\$55 silverstone.com



SOUND

Cougar Immersa

\$59 cougargaming.com



DISPLAY

AOC e2450Swh

\$158 aocmonitorap.com/anz



KEYBOARD

Tesoro Tizona G2N

\$55 tesorotec.com



MOUSE

Rapoo V20 Optical Gaming Mouse

\$35 rapoo.com



TOTAL: \$1300

ASUS
No.1 in Quality & Services
The Wall Street Journal Asia

RT-AC5300
Wireless-AC5300
Tri-Band Gigabit Router



Theo looked down at the wretched minion cowering before him. The beads of sweat that formed on the poor creature's brow were quickly dislodged as he shook in terror, awaiting instruction. Finally, Theo spoke: "No changes to the Beast this month."

PERFORMANCE

Most bells and whistles, without breaking the bank

CPU + COOLING

Intel Core i7 7700K with
Noctua NH-D15 CPU
Cooler
\$459 + \$120 intel.com



MOBO

MSI Z270 XPOWER Gaming
Titanium Motherboard
\$510
msi.com



GPU

Asus Strix GTX 1070 OC
Gaming 8Gb
\$639
asus.com.au



MEMORY

G.Skill RIPJAWS 4
32GB KIT 4X8GB
\$289
gskill.com



STORAGE

2TB HDD (any) + SAMSUNG 500GB
M.2 NVMe SSD 960 EVO
\$375
samsung.com/au



CASE

Corsair Graphite 760T
Full Tower Case Black
\$220
corsair.com/en-au



PSU

Be Quiet! Dark Power
Pro 11 850W Power Supply
\$260
bequiet.com



SOUND

Sennheiser PC 373D
\$329
en-au.sennheiser.com



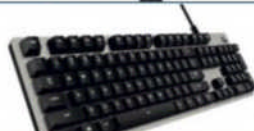
DISPLAY

Acer Predator XB271HU
\$979
acerstore.com.au



KEYBOARD

Logitech G413 Silver
\$129
www.logitech.com/en-au



MOUSE

Roccat Kone EMP
\$99
www.roccat.org



TOTAL: \$4408

THE BEAST

When overkill is barely enough...



CPU + COOLING

i7-7700K + Coolermaster
Masterliquid Pro
\$459 + \$133
coolermaster.com



MOBO

AORUS GA-Z270X-GAMING9
\$799
gigabyte.com.au



VIDEO

Aorus GeForce GTX 1080 Ti
Xtreme Edition 11G
\$1229
gigabyte.com.au



MEMORY

2 x 16GB Corsair Vengeance LPX
DDR4 3000
\$318
corsair.com/en-au



STORAGE

Samsung 960 Pro 2TB +
Seagate Barracuda Pro 10TB
\$1649 + \$699
samsung.com/au



CASE

InWin H-Frame 2.0
\$1699
inwin-style.com



PSU

Corsair RM1000i
Special Edition
\$205
corsair.com/en-au



SOUND

Astro A50
\$469
www.astrogaming.com



DISPLAY

Asus ROG Swift PG27AQ
\$1349
asus.com.au



KEYBOARD

Corsair K95 Platinum RGB
\$349
corsair.com/en-au/



MOUSE

Razer Deathadder Elite
\$99.95
razerzone.com/au-en/



TOTAL: \$9456.95

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5 GHz-2 2167 Mbps



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YOUR CHEST!**

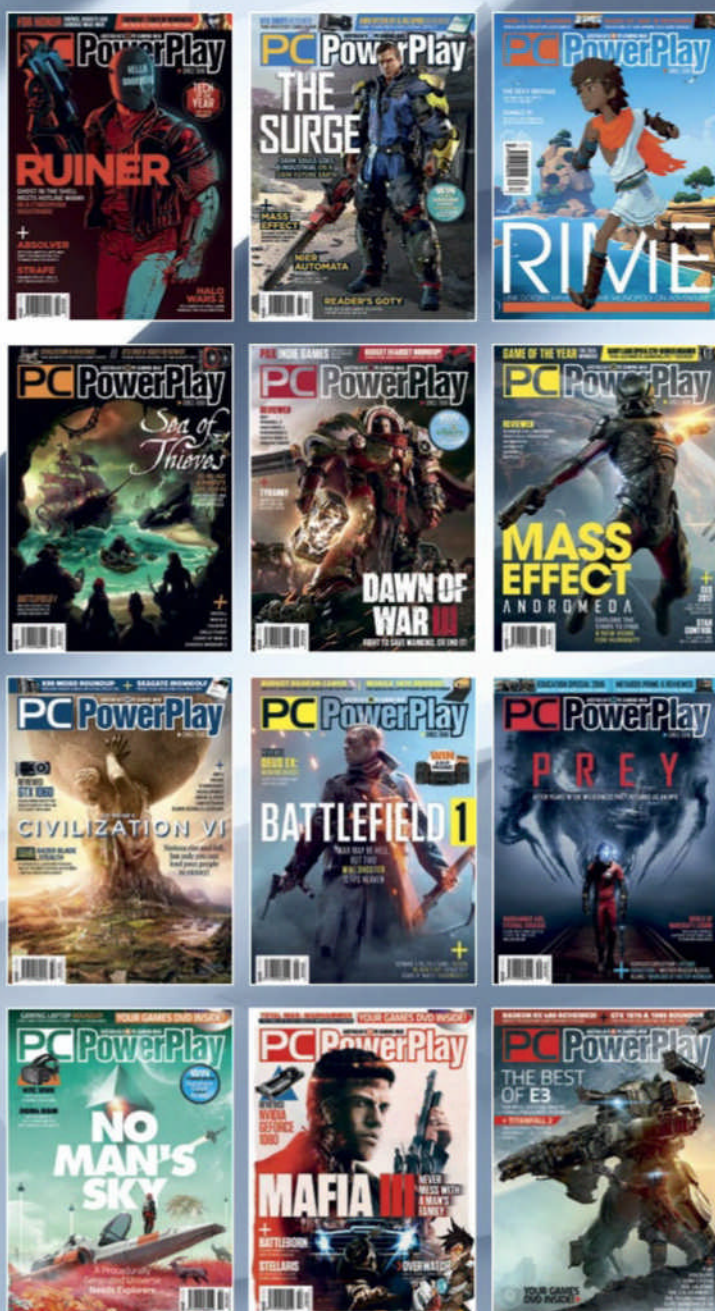
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Hubris and Catastrophe

In the last days before the Great MMO Crash of 2008, Tabula Rasa had it all: a rich publisher, an original premise, an association with a famous developer from the past, and a fiercely loyal fanbase. So why couldn't any of these save it?



TABULA RASA

DEVELOPER DESTINATION GAMES (REALLY, NCSoft)
RELEASED NOVEMBER 2007 (SHUT DOWN IN
 FEBRUARY 2009)

PERSONALITY RICHARD GARRIOTT

NUTSHELL Despite taking seven years to develop, Tabula Rasa remained live for just 16 months. NCSoft left nothing but pain, penury and strife in the game's wake, including a US\$28 million payout to Richard Garriott.

Back in the mists of ancient time (2000), Richard Garriott was fuming. He knew he was onto something, with this MMORPG business. Ultima Online showed that MMOs (as we call them now) were the future of gaming... all they needed was publishers to believe in them.

Garriott had sold his company Origin Systems to EA back in 1992, because big visions need big money. But insanely, EA systematically cancelled all of Origin's new projects, even Harry Potter Online. By 2000, it seemed infuriatingly obvious: nobody at EA except Garriott believed in MMOs anymore.

So Garriott resigned, and founded (yet another) company called Destination Games (Origin - Destination, geddit?). They started work on a vast and ambitious MMO called Tabula Rasa. Perhaps some in the industry wondered how a developer as small as Destination could possibly make and support an MMO...

All was revealed when Garriott's non-compete clause with EA expired. Destination immediately announced a partnership with NCSoft, in many ways the world's first successful MMO publisher. Based in South Korea, NCSoft had made big bucks with Lineage, and was keen to expand and crack that lucrative US market.

No doubt NCSoft felt confident that Garriott would deliver them something amazing, and quickly. After all, he'd done all those Ultima games, right? Sure, the last two singleplayer Ultimas weren't that great, but Ultima Online had shown where the future was. Garriott knew MMOs, hell he even coined the term MMORPG!

Unfortunately for NCSoft, Tabula Rasa



■ a seven year saga of rewrites and resignations and hirings and firings ■

was not completed quickly. Little did they know in 2001, but the game was only just beginning a seven year saga of rewrites and resignations and hirings and firings and resets and redefinitions.

Part of the problem, it seems, was that for a long time - years in fact - if you asked a Tabula Rasa developer: "What IS Tabula Rasa?" they would reply "Uh..."

Not that subsequent events made it easy on the team. When Blizzard released World of Warcraft in 2004, the stakes weren't so much raised as catapulted into the sun. Everyone was talking about World of Warcraft, and no one gave a crap about NCSoft games anymore. Except South Korea, of course.

Still, it gave the team a renewed sense of

focus. Decisions, finally, had to be made.

For those who never played Tabula Rasa i.e. nearly everyone, the game was a sci-fi MMO set in "the future" on two planets. These worlds were a battlefield between the Allied Free Sentients and the Bane. (In case you can't figure it out, the Bane were the bad guys.) There was a bunch of stuff about ancient aliens and whatnot, and this leads to Logos, the game's sci-fi equivalent of magic.

Logos is a pictographic language, the understanding of which grants special powers (lightning attacks, poison, sprinting etc). As players travel the world they find more Logos symbols which they add to their Logos tablet. When you start a new character, this tablet appears as a blank slate... thus Tabula Rasa.



Convoluted? Sure. Ambitious? Beyond. There was a tree-based class system, dynamic missions that are so much more than “get me 20 space-wolf pelts”, semi-FPS combat with sticky targeting, a dynamic persistent battlefield, player bases, clan wars, a sophisticated PVP system and much more.

Garriott and his team tried to mash all this into the game, while chasing the increasingly successful and dominant competition. It took so long, by the time the game went live, the world was right in the middle of an MMO bubble... and that bubble was about to pop.

Sure, Tabula Rasa was released over the objections of its development team that it wasn't even ready for Beta. Sure, even as players ranted and raved about the craptacular state of the game, the team continued to work through the night to implement all the stuff they'd promised us on the back of the box. And sure, by the time the Great MMO Crash of 2008 sent every publisher scurrying to cut its losses, Tabula Rasa was starting to look like a good, interesting, unusual MMO. But it was too late.

Because during this time, Richard Garriott got bored and distracted. How bored and distracted? Bored and distracted enough to go to actual space. He became all about going to space - or rather, he went back to being all about going to space. Garriott had actually purchased the first “space tourist” ticket with Space Adventures (he even helped found it in 1998), but following personal financial troubles in the dot-com crash, in 2001 he sold his seat to Dennis Tito - who now gets to be known as the first space tourist.

These days, Garriott admits he went back to game development not because of

his burning desire to see MMOs become a thing, but rather to make enough money to go to space.

He didn't actually fly to the ISS until October 2008, but Space Adventures announced his booking in September 2007 - right when Tabula Rasa was being shoved unceremoniously out the door.

Garriott finally got his space trip in October 2008. He had a great time, but while still sitting in quarantine after landing, was surprised to discover - via open letter from NCSoft - that he had “resigned” from the company because his spaceflight had inspired him to “pursue other interests”.

Weeks later, NCSoft announced it would shut down Tabula Rasa, on the grounds that nobody was playing it - by NCSoft standards anyway. After seven years, followed by critical disdain and a lacklustre commercial response, NCSoft was over it all. The company had successfully proven that an American developer wasn't good enough to make its kind of MMO.

Unfortunately, NCSoft had also forgotten that what Americans ARE very good at is litigation.

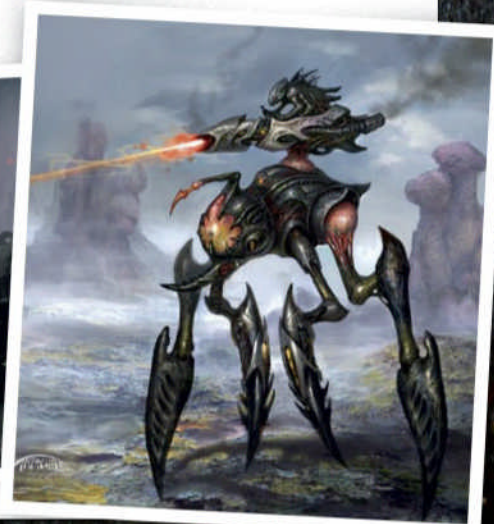
Garriott sued NCSoft for \$24 million - an amount that was surely only co-incidentally close to the price of his spaceflight ticket - not on the grounds of breach of contract or failure to support, or anything actually defensible like that. No, the idiots had fraudulently reported Garriott's resignation as a way of forcing him to dump his stock in NCSoft at a massive loss.

The Austin District Court awarded Garriott \$28 million. NCSoft appealed. The judgement was affirmed.

NCSoft might have been pissed that Garriott was just using Tabula Rasa to get money to go to space, but the end result was brutally ironic: Not only did Garriott make enough money to go to space, and go to space, he also ended up with all the money.

It was as if Garriott had his cake, ate his cake, and then sold both cakes for a massive profit.

Meanwhile the vaguest hints of Tabula Rasa live on in Mass Effect and other sci-fi RPGs, but really... nobody cares. **ANTHONY FORDHAM PC**



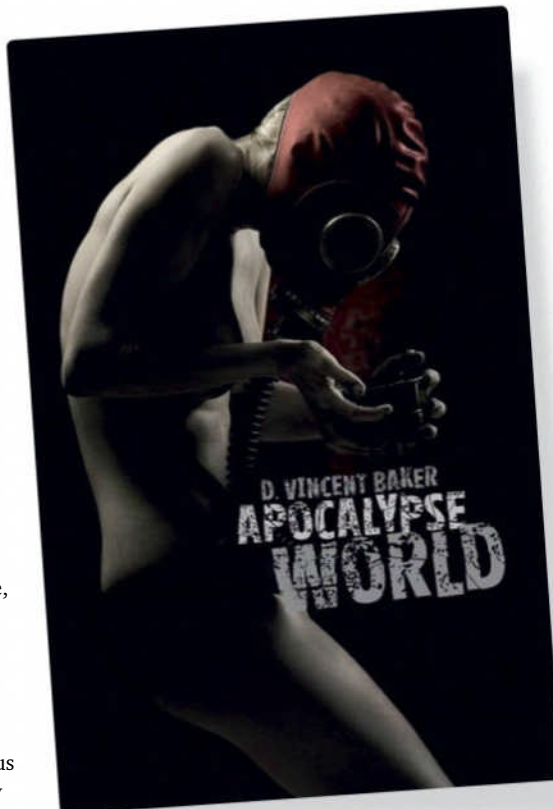
Engine Trouble

DANIEL WILKS is going back to the drawing board

Following in the footsteps of a former PCPP editor, I am making a game. Unlike Dan Hindes, I'm not jumping feet first into the digital world but instead reaching back to my roots and putting together a tabletop roleplaying game. I've been working on the design document and the core concepts for a few months and now I'm getting stuck into the first steps of prototyping. The more of this I do, and the more I talk to people in computer game design, the more I realise that creating a tabletop game and creating a digital game are far more similar than I would have ever expected.

The inspiration for my game is simple. I run two different campaigns, one at my flat and the other over Skype, but in both cases it's high impossible to get everyone together at the same time, making it hard to have continuity in stories that last more than a few hours. One of the campaigns has been on permanent "maybe next week" hiatus since last year, and the other, originally planned to be fortnightly, is closer to maybe once a month or two. My solution, or at least the solution I'm trying to make with my game, is something that has a larger but looser group of players, allowing games to be played with whoever can make it on the day but still have a sense of continuity for campaigns. I have a planned setting that explains the large character pool, only a few of which will be available at any given session, and a framework of how continuity can be maintained when the players present are essentially unknown until the day of play. What I don't have is a core set of rules.

Early in the project I decided that I wouldn't be creating the core rules set, or the engine of the game, by myself, instead streamlining my development process by either licensing an established engine or using one of the open source ones on the market. When it comes to roleplaying engines, the terminology may differ, but the differences between tabletop engines are much like those of the commonly available game engines. Each engine has strengths and weaknesses, and is more suited to certain styles or jobs rather than others. Some allow for deep modification and customisation, whilst others are far more



▲ The Apocalypse Engine is crunchy yet fudgey and just all-round delicious.

direct in purpose and have most of the base mechanics for a game already built in – Unreal 4 and the Cryengine allow for much more customisation and modification than something like RPG Maker or GameMaker: Studio – but more often than not more complexity and customisation options means more required experience or knowledge.

When it comes to tabletop RPGs, rules sets are often broken into two categories according to the types of rules they use. They are referred to Crunchy and Fudge systems. A Crunchy system contains a thorough set of rules that encompasses nearly anything a player or GM can do, with little need for

interpretation. A Fudge system, on the other hand, relies on more simplified or streamlined rules that require a mix of justification and interpretation. There are a number of open source or open license RPG engines out there, many of which are the engines of popular games such as Dungeons & Dragons or Pathfinder available through OGL (Open Gaming License), as well as a number of lesser known engines such as Gumshoe, WaRP, Open D6, PBtA, Fate, OSRIC, Open Legend, Dominion and more.

What I'm after for my game, is a rules set that combines elements of crunch and fudge – having enough mechanical complexity and thoroughness that it can support pretty much any action players want to take, but also leaving outcomes open to context and interpretation. Since late last year when I started working on the project, I had been working using the Fate system by Evil Hat Productions. Mechanically the game is pretty deep, but the way the game works, players have as much to do about determining outcomes as dice rolls.

While I was happy with the progress I was making in making a working prototype, I came to realise about a month ago that I had probably made a wrong decision regarding the engine. I love the Fate system, but it requires a level of rules knowledge in players, as well as specific dice, that would negate one of the key design aspects integral to my game – a simple pick-up-and-play core that can be expanded on with experience.

One of the problems with the Fate system is that for all its strengths, it not only requires some rather deep system knowledge, it also uses tokens and proprietary dice for rolls. In PC gaming terms, it's like a game that has a learning cliff and requires a specialised controller. Although I haven't made a final decision, and I'm heavily researching a new engine, I'm strongly verging towards the Apocalypse Engine for a number of reasons. It uses 2d6 for all rolls, character sheets are specifically designed to contain all the rules the player needs to know, the engine is designed to be hacked and modified and finally, it's totally free.

Once the decision is made and I have a rough working prototype, the next step will be to hire an artist. 

the differences between tabletop engines are much like those between game engines



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